

small air forces observer

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January 2010

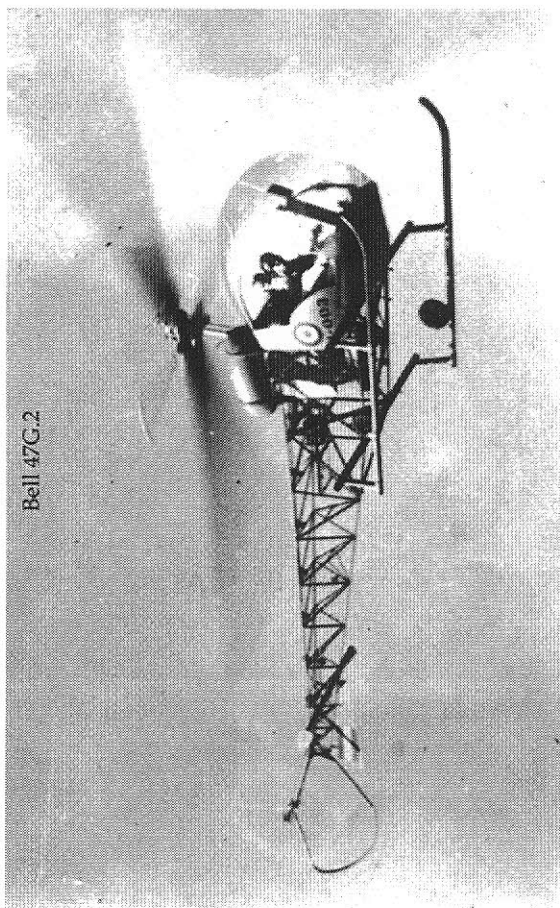
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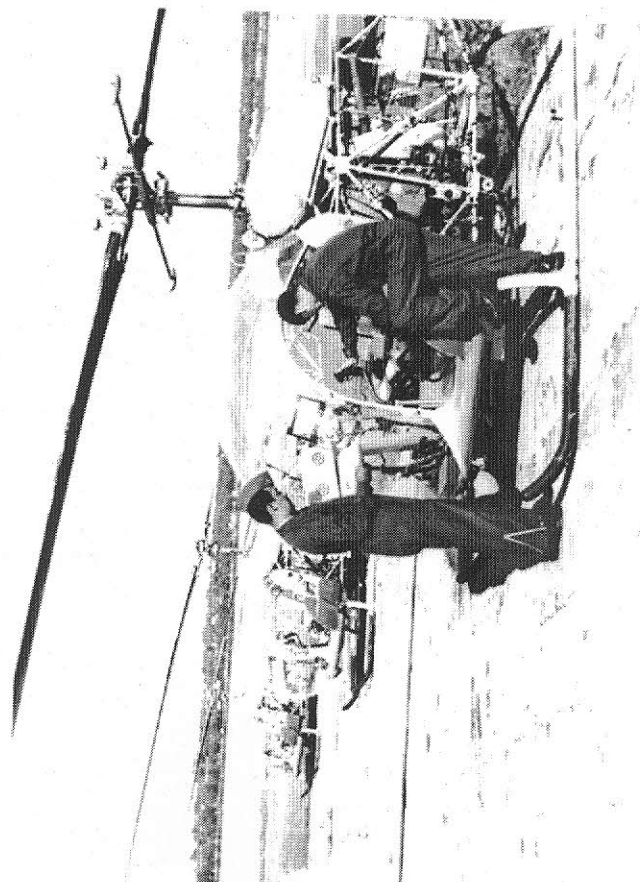
Netherlands East Indies Buffalo Pilots
Mongolian Air Force in the Nomonhan
Small Air Force Bonanzas
Piper Aircraft in Katanga
Small Air Force Bell 412
Bell 47 in Paraguay

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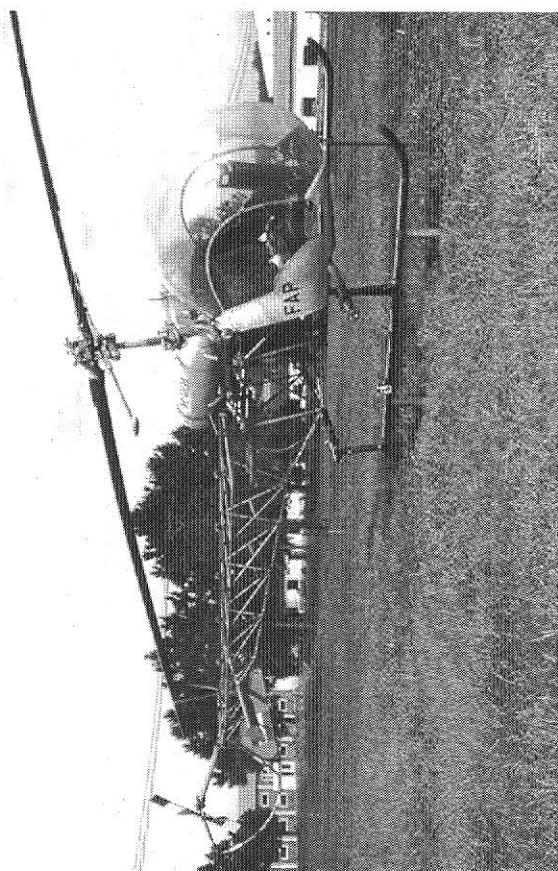
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SMALL AIR FORCES OBSERVER

The Journal of the Small Air Forces Clearing House

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SAFO EDITORIAL POLICY:

The purpose of the Small Air Forces Clearinghouse (SAFCH) is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching aviation history, both military and civil, from all periods of time, and for all the smaller countries. The results of this research are published in our quarterly journal, the Small Air Forces Observer (SAFO) Articles published in SAFO can be reprinted provided permission of the author is

obtained and the SAFO is identified in the reprint.

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COVER PHOTO: On page 78, Antonio Sapienza continues his series on military aircraft in Paraguay with the story of the first helicopter to see service in Paraguay – the Bell 47. The cover photo shows Captain PAM Alberto Fragnaud piloting a PAF Bell 47G-2 s/n H-003 with a young lady passenger over Ñu-Guazù AFB in the late 1950s. Photo copyright: Fragnaud Files.

IN MEMORIAM: It is with great sadness that we report the death of long-time member Sid Napier of Switzerland. Sid was the author of many well-written SAFO articles on the history and modeling of Greek aircraft. He was an enthusiastic supporter of the SAFCH, sponsoring for many years members from the Czech Republic and Greece. He will be missed.

AUSTRIA

ÖFH

NACHRICHTEN

(Oesterrichische Flugzug Historiker, Pfenninggeldf 18/2/14, A-1160 Wien. Write for free sample.)

3/09 (40 pages). "Casimir Kubala" 3 pages on ex-Austro-Hungarian Air Force (kuk) Pole including 10 photos Polish Air Force Fokker E.V and the ill-fated Amiot in which Kanala and Ludwik Idzikowski attempted to fly across the Atlantic Ocean. A color photo of an Austria Eurofighter Typhoon flying along side a Red Bull P-38 Lightning.

BELGIUM

KIT (IPMS Belgium, c/o Michel Willot, dreve de Champagne 14, B-1190 Bruxelles; French & Flemish. International Postal Money Order for \$30 for 4 issues.

#155 3/2009 (56 pages) "Hurricane Mk.IIc (Pt 2)" 9 pages including 20 small photos of details of construction and 8 photos of the model completed as ZAoM of the Belgian Air Force. "Walk Around: Hurricane Mk.II" 7 pages with 65 photos of detail of the Hurricane in the Brussels Air Museum. "Embraer ERJ 135 LR" 5 pages of color multi-view drawings of aircraft in Belgian AF markings. "Embraer ERJ 135 (-135)" 3 pages on building 1/72-scale kit including 4 photos of the model completed in Belgian AF colors. "Embraer ERJ 145: RVHP Resin 1/72" a 2-page kit review. "Embraer ERJ-135/145 Walk Around" 6 pages including 48 photos of details.

FINLAND

FINNISH AIR FORCE SIG, c/o Nils R. Treichel, Gustav-Adolf-Str.16, 27404 Zeven, Germany. Entirely in English.

No. 28 (10 pages) "Who Dares ..." Nils describes the markings of the Finnish Bf 109; 4 pages including one page showing a generic camouflage scheme and another page of drawings of the 109G versions. "Building the Whirlwind" a paragraph on building the AZ Model's Pyry. "To the Rescue" 2 pages on the markings of 2 Finnish

Medivac EC-135 helicopters including profile drawings. "Wooden Wonder?" 2 pages on converting Novo's Fokker 'Southern Crosss' into a Finnish single-engine Fokker F.VIIa 'FE-2' including 2 profile drawings.

FRANCE

AIR MAGAZINE, TMA, 75 rue Claude Decaen, 75012 Paris, France. Six issues a year. 35 euros in France, 41 euros in Europe, and 50 euros for the rest of the world. Payment by Visa, Eurocard, Mastercard. E-mail: airmagazine@wanadoo.fr.

No. 41 Mars/Avril 2008 (66 pages) "Hans Ulrich Rudel" 23 pages including 50 photos and 4 color profile drawings (Ju 87). "Fiat G.55 en Argentine" 10 pages including 14 photos, a color 3-view drawing, and 4 color profile drawings. "Le Fairey Fox" 23 pages (with sections on the Belgian Foxes in action and the service of the Fox in Peru) including 25 photos, a 3-view drawing in 1/72 scale, and 5 pages of color drawings [Belgium (two 3-view & 3 profile drawings); Kuangsi (one 3-view drawing); Peru (2 profile drawings); & Switzerland (one profile drawing)]. "Actualité Maquettes & Livres" 4 pages of reviews (16 kits and 21 books).

No. 42 Juin/Jullet 2008 (66 pages) "Les Mustang plangent sur Reghin!" 12 pages on a USAAF raid of 31/8/44 including 11 photos, two color 3-view drawings (P-51D), and 6 color profile drawings [P-51D (3), Fw 190F (1), Bf 109G (1), & Hs 129B (1)]. "Le Breguet 41" 14 pages including 38 photos and a 2-page 3-view drawing in 1/72 scale. "Avia S-99 et S-199" 24 pages including 52 photos, 2 color 4-view drawings, and 12 color profile drawings. "Antoine Padoue Filippi" 5 pages on pre-WWI French helicopters. "Actualité Maquettes & Livres" 4 pages of reviews (10 kits & 28 books). **Nos. 43 to 45** were reviewed in the July 2009 issue of SAFO.

No. 46 Mai/Juin 2009 (66 pages) "Martin 139WAA et Focke-Wulf Fw Weihe en Argentine" 20 pages including 47 photos, 2-page table of

individual aircraft histories, one 2-view drawing and 4 color profile drawings of the Martin 139, and one color profile drawings of the Fw 58. "Le Beriev Be-8" 11 pages including 38 photos and a 2-page 4-view drawing in 1/100 scale. "Les Biplanes Fleet: 2^e partie" 7 pages including 3 color photos of a museum Fleet Fawn, 6 color photos of a museum Fleet 1 painted as a USAAC YPT-6, one photos of a Spanish AF Fleet 10, 5 photos of Portuguese Fleet 10/16, 4 photos of Paraguayan Fleet 3, and one photos of a Fleet 7 of the New York State Police. "Lers Autovolants de Felix Faure" 3 pages on an early (1904) French helicopter including 4 photos. "Nieuport-Delage NiD-29 C1" 12 pages including 28 photos, one color 23-view drawing, one 2-view drawing, and 5 color profile drawings (all in French markings). "En maquette Fleet Finch et 10G" 4 pages on building the 1/72-scale FR-ROM kits including 9 color photos of the Finch during construction and completed in Chinese markings, and 6 color photos of the 10G under construction and completed in Romanian markings. "Actualité Maquettes & Livres" 4 pages of reviews (17 kits, one decal set, & 17 books).

No. 47 Septembre/Octobre 2009 (66 pages) "Le Douglas XB-19" 14 pages including 38 photos (many in color), two color 3-view drawings, and 3 color profile drawings. "Nieuport-Delage NiD-29 C1: En service à l'étranger" 27 pages Belgium: 6 pages, 19 photos, one color 3-view drawing, & 3 color profile drawings; Italy: 4 pages, 7 photos, one color 3-view drawing, & 4 color profile drawings; Spain: 2 pages, 5 photos, & one color 3-view drawing; Sweden: 3 pages, 6 photos, one color 3-view drawing, & 2 color profile drawings; Argentina: one page, 3 photos, one color profile drawing; Siam: 2 pages, 4 photos, one color 3-view drawing, & one color profile drawing; Japan: 4 pages, 16 photos, one color 3-view drawing, & one color profile drawing; and China: one page & one photo. And, a two-page, 5-view drawing in 1/72 scale. "28 Avril 1944: Objectif Avord"

6 pages on USAAF raid 22/02/44 including 5 photos and one color 3-view drawing of P-51B. "L'Alérion de Damblanc et Lacoïn". 7 pages on an early (1920) French helicopter including 7 photos and several general arrangement drawings. "En maquette: Le I-16 au 1/32^e" 3 pages on building the Azur kit including 11 photos of the model under construction and completed. "Actualité Maquettes & Livres" 4 pages of reviews (12 kits and 19 books).

AVIONS: Toute l'Aéronautique et son Histoire (Lela Presse, 29 rue Paul Bert, 62230 Outreau, France. 50 euro for 6 issues).

#172 Novembre/Décembre 2009 (72 pages) "Potez 36: L'appareil qui révolutionna l'aviation de tourisme (3^e partie)" 18 pages including 45+ photos and 4 color profile drawings. "Benny Benedict: le pilote qui collectionnait les appareils ennemis" 7 pages including 18 photos of German and Italian aircraft in Allied markings. "Retour sur l'aviation militaire lithuanienne" 9 pages with 20 photos, two color 3-views (port, top, & bottom) of Letov Š-20L, and 10 color profile drawings (Halberstat CL.IV, Ansaldo SVA 10, Albatros C.III, Martinsyde F-4 Buzzard, Albatros C.XV, Rumpler C.I, Halberstat C.V, Fokker D.VII, Albatros J.II, & Albatros B.II). "Le 40th Bomb Group en Inde" 7 pages including 12 photos and 3 color profile drawings (B-29). "Karl Fritz Schossstein, l'as du Grand Nord" 9 pages including 27 photos (mostly Me 110). "Le TLP quitte Florennes" 6 pages including 15 photos (Polish F-16, Italian Harrier, Spanish F-18, Greek F-16, etc.). "Mai-juin 1940: ces mystérieux avions 'Italiens' dans le ciel de France" 10 pages including 8 photos of Italian aircraft.

GERMANY

FLIEGER REVUE EXTRA (Verlag Fliegerrevue, Herrn Detlef Billig, Oranienbamm 48, D-13469 Berlin. 4 issues per year, \$66 surface. Payment by check drawn on German bank)

Errata: The review of Extra that appeared in the October 2009 issue of SAFO was not for Extra #24 January

2009, but actually for Extra #25 May 2009.

#26 August 2009 (116 pages) "Sondermission Jan Mayen" 24 pages on Luftwaffe mission to the far north including 68 photos (mostly He 115), a map of Jan Mayen Island, and one color profile drawing (He 115). "Flugzeuge aus Dänemark" 34 pages on aircraft constructed in Denmark including 107 photos, table listing aircraft produced by the Cub Aircraft Co and by Skandinavisk Aero Industri A/S (producer of the aircraft designated KZ), and 6 color profile drawings [Magen 3, N&W Aa, G-Masine, Fokker C.V (2), Rofix (in Turkish markings), & KZ VII. "Tansanias Luftwaffe", 24 pages on the Tanzanian Air Force including 48 photos, a map, a table listing individual aircraft used since 1966, and 7 color profile drawings (DHC-3 Otter, Fouga Magister, DHC-5 Caribou, MiG-21MF, Nanchang PT-6A, Bell 412, & Augusta Bell AB-412EP). "Die Airlines der CIA – Teil 2: Zwischen Koreakrieg und Dien Bien Phu" 26 pages including 71 photos, 3 maps, and 4 color profile drawings [C-46, C-54, B-26C (in Chinese markings), & C-119 (in French markings)].

ITALY

JP4 Menslie di Aeronautica e Spazio. Via XX Settembre, 60-50129 Firenze, Italy. Email: jp4@dueservice.com. Website: www.ediservice.it.

Novembre 2009 (100 pages) Color photos: Nigerian ATR 42; Thai Gripen & ATR 72; Swedish A-109; and Qatari Lockheed C-17. "Tiger Meet 2009" 6 pages including 27 photos. "Incidenti Militari" one pages including 5 photos (Malaya Pilatus PC-7; Japan YS-11; Bolivia Lama FAB-730; & Uruguay CASA 212 FAU 531 marked as UN-146). "Recensioni" 4 pages with reviews of 17 books.

POLAND

LOTNICTWO (Krzysztof Zalewski, ul Grochowska 306/310, pok. 206, 03-840 Warszawa. E-mail: kz@magnum-x.pl.)

8/2009 (98 pages) "Paris Air Show 2009" 12 pages including 28 photos. "Sily Powietrzne Bahrajnu" 8 pages on the Bahrain Air Force including 21

photos [F-16 (5) & F-5E Tiger II (8)] and a fold-out poster of an F-5F. "BAE Systems Hawk" 13 pages including 28 photos (Finnish, Indonesian, Saudi Arabian, South Korean, Swiss, United Arab Emirates, Malaysian, Canadian, Australian, and Indian), and a scale 6-view drawing. "Operacja 'Most I, II, I III' (cz. I)" 10 pages including 9 photos (RAF C-47, Polish Squadron B-24, & Halifax), and 2 color profile drawings (RAF C-47). "Junkers Ju 90 i Ju 290" 10 pages including 24 photos, a 4-view scale drawing, and a color profile drawing.

9/2009 (98 pages) Color photos: Romania Alenia C-27; Taiwan E-2C Hawkeye; Afghanistan Eurocopter Tiger HAP & Mi17; and Israeli C-130. "Air Power 2009" 2 pages including 8 photos (Austrian Typhoon, PC-6C Turbo Porter, PC-7 Turbo Trainer, C-130, S-70 Black Hawk, & AB-212). "MiG-21UPG Bison w hinduskim lotnictwie wojskowym" 3 pages including 8 photos of Indian MiG-21 and a 2-page center-fold photo. "Wizyta w Base Aerea N^o 6" 6 pages including 15 photos of Portuguese Lynx helicopters. "PZL-Mielec M 28 Bryza" 9 pages with 19 photos and 3 color profile drawings. "PZL-39. Wprowadzenie do problemu" 11 pages including 21 photos of aircraft.

USA

IPMS/USA JOURNAL (IPMS/USA, PO Box 2475, North Canton, OH 44720-0475 USA. Six issues per year: In USA: \$25 for adults (18 and older) and \$12 for juniors (17 and younger); Canada & Mexico \$30; all other \$32.)

July-August 2009; Volume 21, Number 04. (72 pages) "Modeling a Fallen Falkland Skyhawk: The short combat history and loss of A-4B C-215" 4 pages including 6 photos of the crash sight, 2 photos of the completed model, and one photo of C-215 taken before the conflict. Other aviation-related articles include "Martin's Mediocrity: Crafting the ill-stared AM-1Q Mauler from Siga's 1:72 kit", "Mercury Redstone to the Shuttle: Six US Launch Vehicles in 1:200", and "One 54mm Step for Man...: Building Buzz Aldrin from Andrea's Apollo Astronaut Figure".

PARAGUAYAN AIR FORCE BELL 47/H-13H

Antonio Luis Sapienza Fracchia

In the early 1950s, the Paraguayan Air Arm (AAP) urgently needed new flight material. With the exception of a few Beechcraft 35 Bonanzas, this small air force still relied on the Lend-Lease aircraft received in the 1940s: Fairchild PT-19, Vultee BT-13, N.A. AT-6C and Beech C-45F.

In January 1953 when the Paraguayan Air Arm bought its first Douglas DC-3 in the U.S., the government requested some aircraft from its U.S. counterpart: 20 armed N.A. T-6D Texan, four Bell H-13H, and four Beech Bonanza. The total cost of the operation was about \$1,434,000. The U.S. government did not authorize the sale, giving as a reason that Paraguay did not have the necessary funds to pay for the aircraft.

However, the Commander of the AAP, Col.DEM Epifanio Ovando must have been very persistent as he convinced the President of Paraguay to reequip the Air Arm, and in June 1955 four Douglas DC-3/C-47 and a couple of Consolidated-Vultee PBY-5A Catalina were purchased in the U.S. for the Military Air Transport (TAM). That year, the Paraguayan government also authorized the purchase of the AAP's first two helicopters - Bell 47G-2.

These first two Bell 47G-2s were acquired new from the factory on export certificates E27574 and E27575 on July 15, 1955. They received the military serials H-001 (c/n 1321) and H-003 (c/n 1330). The first one arrived in Paraguay on September 14 and the second on October 3, 1955.

As soon as they arrived, they were flight tested by Bell personnel who also gave training to a few AAP pilots, including Captain PAM Alberto Fragnaud who later became an instructor. The Bells were painted in bright orange (cockpit, fuel tanks, stabilizers), with light green metal frame and skis. The Paraguayan roundels, as well as the military serials in black, rounded letters and numbers, were painted on both sides of the cockpit and under it. A Paraguayan flag was painted in the vertical stabilizer.

Capt. PAM Fragnaud was a very famous AAP pilot and he was well known for his risky acrobatic maneuvers in all kinds of aircraft, including the Bell helicopters. On one occasion when he was flying H-003, he probably wanted to impress a young lady who

was flying with him. After performing a dangerous maneuver, he hit the ground so heavily that H-003 was badly damaged. The helicopter had to be dismantled and taken to Argentina to be reconstructed.

On another occasion, Capt. Fragnaud gave flight training to the President of Paraguay's son. One may think that there is nothing wrong with this, but the kid was only 12 years old. Fortunately, this time, the helicopter survived! Regarding this incident, the famous British magazine, *Flight*, published a news item, with a photo, in January, 1957:

"Paraguay President's son world's youngest copter pilot: The pilot shown above precisely hovering a Bell 47G is only 12 years old, the youngest copter pilot in the world. He is Gustavo Stroessner, whose father is president of Paraguay. The Bell he's hovering has only single controls (Author's note: this is not true because both Bell acquired in 1955 had dual controls), making the other occupant, Capt. Alberto Fragnaud, a passenger. Joe Mashman of Bell Aircraft was amazed to see the boy doing an expert job of flying when he called on the president recently to demonstrate the new 4-place Bell 47J. 'I let Gustavo fly his father in the J.' Mashman said."

Despite Capt. Fragnaud's adventures with the Bell, the first two AAP helicopters remained on active duty until 1972. During the 1960s, both Bells received IRAN maintenance at the Brazilian Air Force facilities in Campo Dos Afonsos, Rio de Janeiro.

These helicopters served with the *Grupo Aéreo de Entrenamiento y Transporte (GAET)* and were the only choppers in the Military Aviation until 1972 (and also in Paraguay, because there were no civil helicopters until the early 70s).

On March 23, 1972, the American Government donated eight Bell H-13H-BFs to the Paraguayan Air Force through the Military Assistance Program (MAP). By that time, the first two Bells had already been withdrawn from service. These new helicopters were originally delivered in a light grey color scheme, but were soon painted in bright orange; the metal

frame and the skis were painted black. The tips of the skids were painted yellow. The serial was painted on the fuel tanks and the initials FAP were painted in black letters on both sides of the cockpit. No roundels were painted on them.

The MAP-donated Bell H-13H-BFs received the following serials:

H-005: c/n 1936, ex-USAF 56-2224. This chopper was wfu in October, 1977. It was sold to Chile in 1992 as CC-PQM.

H-007: c/n 2357, ex-USAF 58-5344. It received 15% damage in an accident and was withdrawn from use in March, 1974. It was not repaired and was used as a source of spare parts for the others. It was sold to Chile in 1992 for spares.

H-009: c/n 1282. This chopper was withdrawn from use in 1980.

H-011: c/n 1412. Wfu in 1982.

H-013: c/n 2080, ex-USAF 57-1842. It was wfu in August 1977. Sold to Chile in 1992 as CC-PQK.

H-015: c/n 1913, ex-USAF 56-2201. It was wfu in August 1973. Sold to Chile in 1992 as CC-PQN.

H-017: c/n 2135, ex-USAF 57-6206. Wfu 1982.

H-019: c/n 2111, ex-USAF 57-1873. It was wfu in September, 1977 but then repaired in 1978. It was destroyed in an accident on March 19th, 1986 near Ñu-Guazú AFB, killing both pilots. Its remains were sold to Chile in 1992 for spares.

In 1972, with the arrival of the MAP-donated Bell H-13Hs, the AAP decided to create a *Sección de Helicópteros del GAET* (the Helicopter Section of the GAET). Its main objective was to train military officers as helicopter pilots.

The Bell H-13Hs were mainly used for observation liaison duties, SAR, and light transport missions. These were the only type of helicopter on active duty in the AAP in the 1970s until the FACH (Chilean Air Force) donated two Hiller SL4s in 1981. In 1982, the FAP acquired a single Hiller UH-12 E4T and a pair of Bell UH-1Bs. At that time, only three H-13Hs were still in active service, but two of them were withdrawn from use that year.

After 1982, only Bell H-13H serial H-019 remained on active duty. It was mainly used as a trainer. Also, every December 10th, the FAP's anniversary of its Patroness, the Virgin of Loreto, H-019 was used to carry the statue of the Virgin in an air procession. It should be understood that 95% of the Paraguayan population is Roman Catholic. Even the FAP has a Catholic Church inside Ñu-Guazú AFB, and there is still a Chaplain with a military rank there.

On January 2nd, 1985, the FAP created the *Escuadrón de Helicópteros del GAET* (Helicopter Squadron of the GAET). The very same year, on November 14th, the FAP approved the use of the Helicopter Pilot Wings (PAMH) and the Mechanic Navigator Wings (MNO) for the Helicopter Squadron flight crews.

On March 19th, 1986 Bell H-13H serial H-019 took off from Ñu-Guazú AFB for a routine training flight early in the morning. It was crewed by Lt. PAM Mario Vera Núñez (instructor) and Sub-Lt. PAM Juan José González. At around 10:45AM, a mechanical failure was detected by the crew as they were returning to the base. According to some witnesses in the area, they saw the chopper losing altitude very quickly and the main rotor was not functioning. The crew couldn't do anything and unfortunately the helicopter crashed into a chapel which was being built near the base. One of the masons there was severely injured while the helicopter crew died due to the impact and fire.

In 1989, Bell 47G-2 serial H-001 was placed as a Gate Guardian in front of the *Grupo Aéreo de Helicópteros (GAH)* hangar at Ñu-Guazú AFB, but in the early 2000s it was sold to Chile.

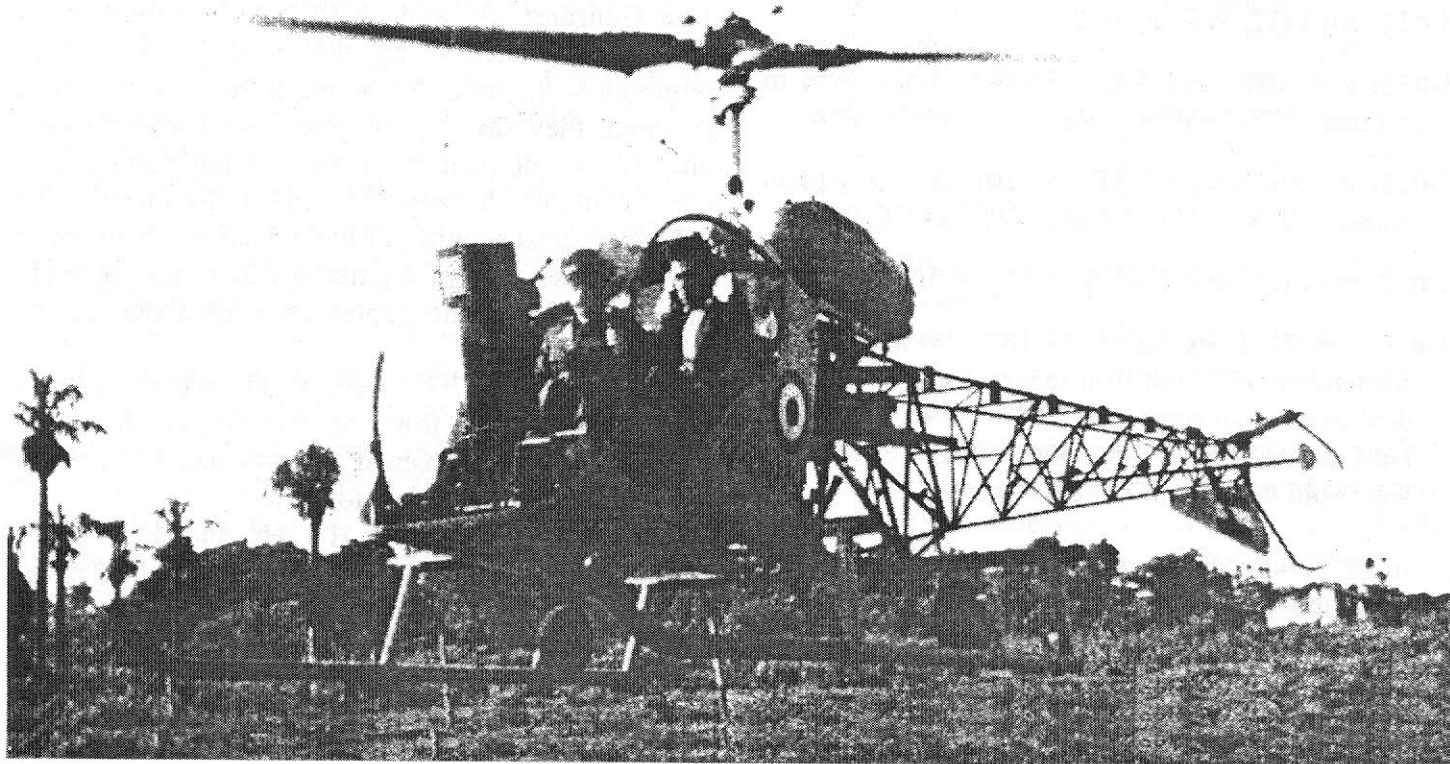
In 1991, at least six H-13Hs and a series of engines and spare parts were offered (among many other aircraft) in an auction which took place at Ñu-Guazú AFB in February. Chileans bought the H-13 package, including all the engines and spares plus H-005, H-007, H-013, H-015 and the remains of H-019.

Acknowledgements: The author would like to thank the *Grupo Aéreo de Helicópteros (GAH)* personnel for the precious information provided. Thanks are also expressed to Sergio Barriga Kreft, of the Chilean *Dirección General de Aeronáutica Civil (DGAC)*.

Antonio Luis Sapienza Fracchia (SAFCH #1160), Paraguay.

Captions for Photos on Page 74

1. Bell H-13H H-019: Captain PAMH Víctor Insfrán with the FAP Chaplain taking off in H-019, carrying the statue of the Virgin of Loreto aboard, on December 10th, 1983. Photo copyright: *Fuerza Aérea Paraguaya*.
2. Bell 47G-2 FAP H-001: This picture was taken in 1989 when H-001 was placed as a Gate Guardian in front of the *Grupo Aéreo de Helicópteros (GAH)* hangar. Photo copyright: Peter Steinemann.
3. Bell H-13H-BF: Three of the eight H-13Hs donated by the MAP are seen here at Ñu-Guazú AFB on March 23rd, 1972. Two FAP pilots are checking one of the H-13s. Photo copyright: *Archivo del Ministerio de Defensa Nacional*.
4. *Escudo del Escuadrón de Helicópteros*: Official emblem of the Helicopter Squadron of the GAET, which was adopted in the mid-1970s. Photo copyright: Author's files.



Bell 47G-2 H-001: Captain PAM Alberto Fragnaud giving flight instruction to 12-year-old Gustavo Stroessner (the President's son) in the Bell 47G-2 serial H-001 at the Ñu-Guazú AFB in December, 1956. Photo copyright: Flight International magazine.

Small Air Force Beech Bonanza 35

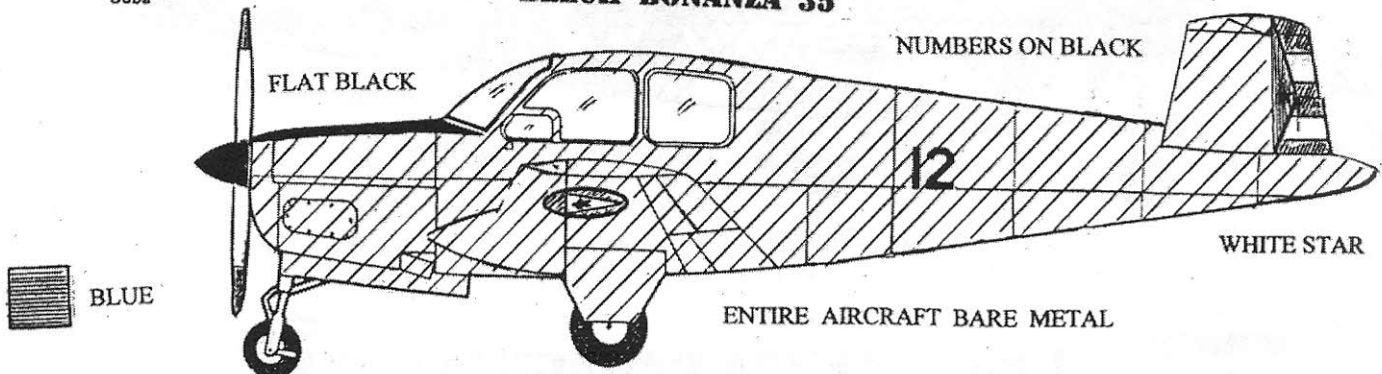
Jorge Delgado P.



Cuba

FUERZA AEREA EJERCITO DE CUBA

BEECH BONANZA 35



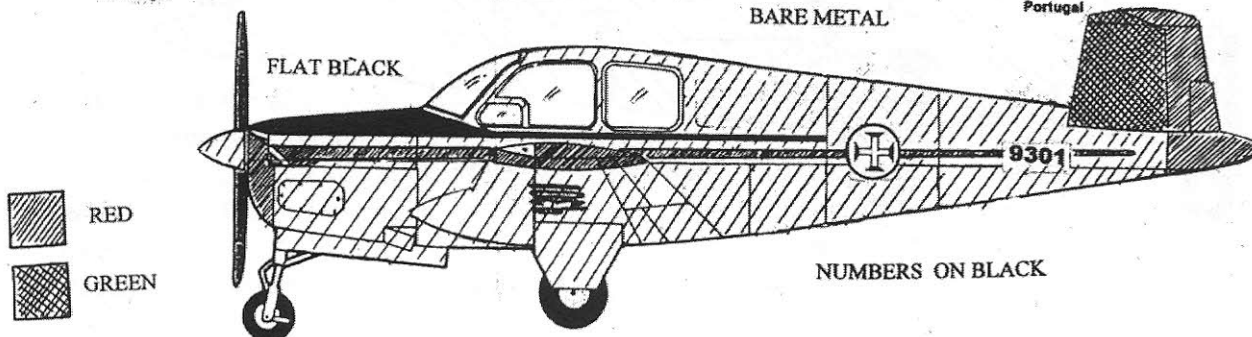
Portugal

FORÇA AEREA PORTUGUESA

BEECH BONANZA 35



Portugal

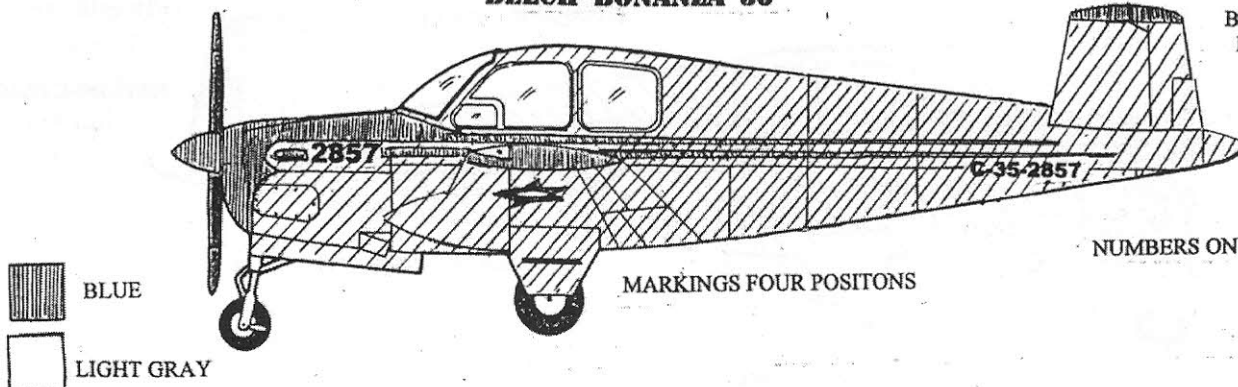


FORÇA AEREA BRASILEIRA

BEECH BONANZA 35



BARE METAL
FUSELAGE





SHEIRUT AVIR

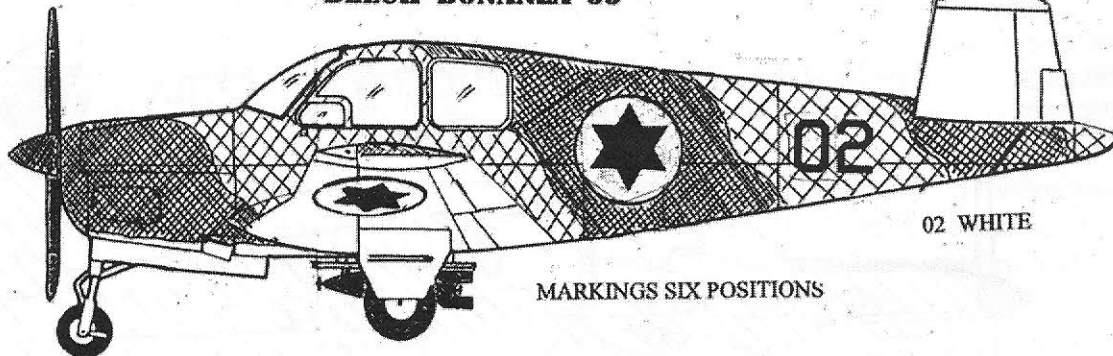
BEECH BONANZA 35



SAND



GREEN

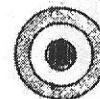


MARKINGS SIX POSITIONS

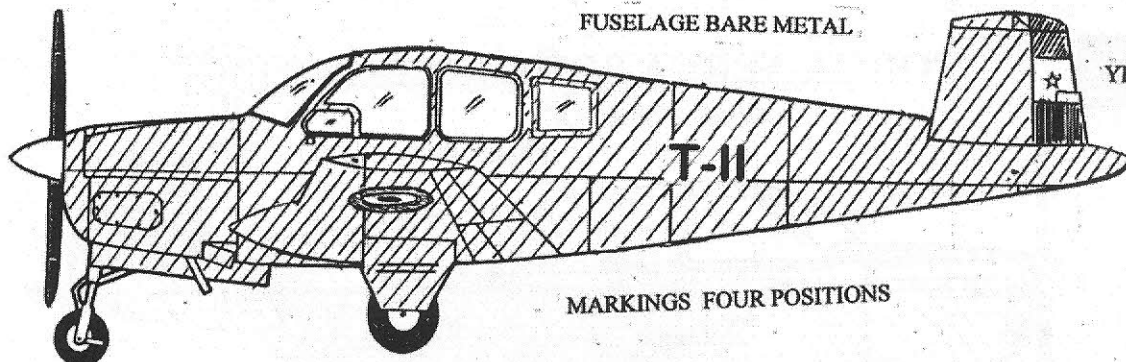


FUERZA AEREA PARAGUAYA

BEECH BONANZA 35



FUSELAGE BARE METAL



MARKINGS FOUR POSITIONS

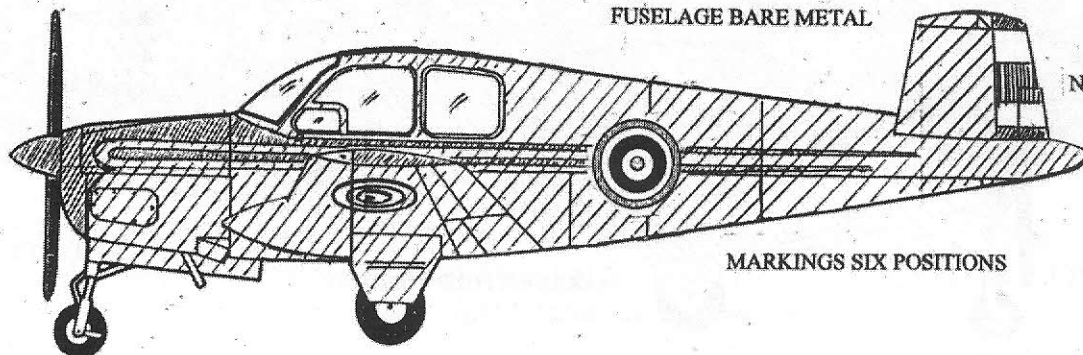


ROYAL TAI AIR FORCE

BEECH BONANZA 35



FUSELAGE BARE METAL



MARKINGS SIX POSITIONS

Cap. Jorge Delgado P. (SAFCH #862)

Notable Brewster Buffalo Pilots in Southeast Asia 1941-1942

Part II: Dutch Pilots

Santiago A. Flores

[Editor's note: The first part of this article, covering Commonwealth pilots, appeared in the October 2009 edition of the SAFO. This second part covers Dutch pilots and includes the reference list for both parts.]

The Dutch Netherlands East Indies Air Force (*Luchtvaart Van Het Koninklijk Nederlands Indisch Leger - ML-KNIL* = Military Aviation of the Royal Netherlands East Indies Army) ordered about 72 Brewster model 339C/D aircraft that were delivered between April 1941 and September 1941. This allowed the formation of the following fighter squadrons.

1-VLG-V. Commanding Officer: *Kapt.* Andreas A.M. Van Rest. At the beginning of the war this unit had about 3 or 4 detachments or patrols that were deployed to locations in Dutch Borneo. In February 1942, this unit absorbed 3-VLG-V to participate in the defense of Java.

2-VLG-V. Commanding Officer: *Kapt.* Jacob Pieter Van Helsdingen. This unit was stationed at Buitenzorg, Java. It moved to Singapore on December 15, 1941, with 12 pilots and nine aircraft. The aircraft arrived without armored glass windscreens. After a search of the aircraft dump and damaged RAF aircraft, all nine aircraft were outfitted with armored windscreens.

3-VLG-V. Commanding Officer: *Kapt.* Pieter G. Tideman. After the beginning of the war, this unit was absorbed by 1-VLG-V and reformed on Hawker Hurricanes.

3-VLG-IV. Commanding Officer: *Lt.* A.J. de Vries. This unit was formed by pilots recently graduated from flight school and with about 15 aircraft received at Andir from Samarinda.

By the time the Japanese began the invasion of Java in February 1942, there were only three Brewster Buffalo squadrons with the following aircraft strength and locations:

1-VLG-V. 15 Brewster B-339's at Andir.
Commanding Officer *Kapt.* A.A.M. Van Rest.
2-VIG-V. 8 Brewster B-339's at Tjisaoek.
Commanding Officer *Kapt.* J.P. Van Helsdingen.
3-VIG-IV. 11 Brewster B-339's at Tjililitan.
Commanding Officer *Lt.* A.J. de Vries.

Some sources credit the Dutch pilots with about 55 enemy destroyed for the loss of about 30 Brewsters in combat, with 11 pilots killed in action, 6 killed in flying accident, one dying of wounds after being shot down, and one dying as a prisoner of war (based on the book *Buffalo over Singapore*.)

The Warbird's Forum members have provided more accurate numbers on the ML-KNIL

Brewster Buffalo Losses

Shot down in combat	18
Destroyed on the ground by Japanese air attack	16
Crashed after combat	3
Did not return after attack on enemy aircraft	1
Emergency landing after air combat	1
Captured by the Japanese	7
Captured on deck of ship	1
Destroyed by retreating Dutch troops	2
Mid air collision with another Buffalo	1
Crashed on take off /landing at airfield	5
Crashed in bad weather	1
Engine failure - landed at sea	1

The book *Buffaloes over Singapore* lists about 15 claims made by the Dutch pilots while flying the Buffalo. One of these claims, on February 21, 1942, was by *Sgt.* J.P. Adam of 3-VIG-V (B-3104). His Squadron Commander, *Kapt.* Tideman, reported that during a dogfight over the Andir aerodrome Adams had fired on a Zero that was seen diving steeply with smoke trailing behind it, but it was not seen to crash. "Sgt. Adam was so fanatic that he did not want to sidestep a head-on Jap. He collided, bringing down the Jap; but he lost his own wing partially and jumped to safety with his parachute. After the action the

Japanese retreated and I was able to form a patrol of three with Lt. Simmons (who had claimed one fighter shot-down) and Benjamins..." (Lt. P.A.C. Benjamins would retire from the air force with the rank of Major General, passing away on December 15, 2000 in his native country). The victim of Sgt. Adam's attack was actually a Ki-43 from the 64th Sentai led by the famous Major Takeo Kato (18 claimed victories, 9 of them in China, killed in action May 22, 1942).

Not only were the Dutch Buffaloes used to attack enemy aircraft, and strafe enemy troops, they were called upon to attack enemy shipping, as noted on March 1, 1942, during the enemy landings on the north western beaches of Java, Eretanvetan. Nine Brewsters (4 a/c of 2-VIG-V led by *Kapt.* Helsdingen and 5 a/c of 1-VIG-V) took off at 0530 hours with 3 Glen Martins of 3-VIG-III to attack an invasion fleet that consisted of about 11 transports, 2 destroyers and 1 cruiser. The Dutch Brewsters strafed men and material that had landed on the beaches, and the Dutch bombers claimed 1 transport sunk, for the cost of one bomber and crew lost. One Brewster belly landed back at base when the pilot could not lower his landing gear.

It is hoped that in the future more information will be forthcoming about the aerial claims made by the Dutch pilots.

Notable Dutch Fighter Pilots

Kapt. Jacob P. Van Helsdinger : 2-VIG-V

This pilot claimed 3 aerial victories, but was killed in action on March 7, 1942, by Japanese fighters, while flying B-396. It has been reported he was grounded on March 1, 1942, so he could be evacuated to Australia where he would take command of a group of cadet pilots. Another source claims that orders were given that squadron commanders were not allowed to fly combat missions, but that *Kapt.* Helsdinger had the order rescinded. He participated in the last offensive operation of the ML when he led four aircraft to attack Kalidjati. There were only four aircraft left and plenty of pilots volunteered. He chose four pilots, but changed his mind and led the mission, replacing one of the pilots who was married. *Kapt.* Helsdingen was attacked by six enemy fighters and was shot-down and killed over Lembang. He died on his 35th birthday, reportedly flying Brewster Buffalo B3-117 (B-3117) while other sources say it was B-3101 belonging to Ens. Jolly. For his actions, *Kapt.*

Helsdingen was posthumously awarded the *Knight of the Militaire Willemsorder 4e Klasse* on February 12, 1948. It was later elevated to the *3e Klasse*. His remains have not been recovered.

12 Jan 42	1 Ki-27	2-VIG-V	B-396
19 Feb 42?	1 A6M	2-VIG-V	
1 Mar 42?	1 Ki-43	2-VIG-V	

Lt. August G. Deibel : 2-VIG-V

He was wounded on two occasions. The first was after claiming his first two kills on January 12, 1942; he was hit in the head and bailed out. He was again wounded on February 19, 1942, while flying B-3110 (other source claims he was flying B-3100). While engaging Japanese fighters, he received wounds from shell splinters. For his participation in the last offensive operations of the NEIAF, on March 7, 1942, he was awarded the *Knight of the Militaire Willemsorder 4e Klasse* in July 1948. During that mission, *Lt.* Deibel engaged enemy aircraft, firing on a single enemy aircraft with strikes being observed before it escaped into the clouds. Later he engaged three more; two fell away under his fire, but his own aircraft was damaged. Returning to Andir, he landed during a thunderstorm and his aircraft ground looped because one of his wheels had been damaged during the combat. It appears that only one of those enemy aircraft he engaged was given credit as destroyed. But Japanese source cite that two Ki-43 were lost in that engagement, so it is possible that his personal score should be 4 instead of the 3 he is generally credited with. He was taken prisoner and survived the war to serve in the post-war Dutch East Indies air force until 1950. He returned to the Netherlands to serve in the Dutch air force only to be killed in a flying accident while flying a Gloster Meteor jet fighter (I-111) on June 12, 1951, while serving in No.325 squadron.

12 Jan 42	2 Ki-27	2-VIG-V	B-3110
7 Mar 42	1 Ki-43?	2-VIG-V	Possibly
	1 more Ki-43		

Sgt. Gerardus M. Bruggink : 2-VIG-V

Another successful Dutch pilot, he is credited with 2 kills. After his first claim, he forced-landed with a damaged engine. He would participate in the last operations of the Dutch Buffalos (reportedly flying B-

3150) before they were ordered to surrender the next day, on March 8, 1942. As a member of the last action of the ML he was awarded a *Knight of the Militaire Willemssorder 4e Klasse* in July 1948. He retired from the air force with the rank of 1st Lt. on June 1, 1955.

12 Jan 42	1 Ki-27	2-VIG-V
? Feb 42	1 A6M	2-VIG-V

Kapt. Andreas A.M. Van Rest : 1-VIG-V
Sumatran-born, he was the commanding officer of the 1st squadron of the 5th Fighter Group of the Dutch East Indies air force. He is credited with two claims while flying the Brewster Buffalo; other sources credit him with two destroyed and probably one shared. These are based on the action on December 19, 1941, when, with 2 wingmen, he intercepted a nine-bomber formation of G3M that had just attacked the city of Pontianak. They made several passes on the last bomber of the formation. On the second pass, they lost the bombers in the clouds. No claims were submitted by the Dutch pilots, but one of the enemy bombers ditched 40 km south of Saigon. After the war he became a U.S. citizen.

19 Dec 41	1 bomber shared	1-VIG-V
? Jan 42	1 floatplane	1-VIG-V
24 Jan 42	1 A6M	1-VIG-V (based on Buffaloes over Singapore)
24 Jan 42	2 floatplanes shared?	1-VIG-V (based on French sources)

Known Combat Claims by Dutch Buffalo Squadrons 1941-1942

This listing is based on various sources. It is not 100% complete and any information or additions would be most welcome. I had trouble translating some of the French text so there could be some errors.

Date	Pilot's Name	Unit	Type
18 Dec 41	A.A. Van Rest	1-VIG-V	1 G3M
	Shared with J. Kuiper & J. Dekeling		
19 Dec 41	B. Winck	1-VIG-V	1 F1M2
	damaged. Shared with W.E. Wessels		
24 Dec 41	C.A. Vonck	1-VIG-V	1 H6K2
	damaged. Shared with A. Berk		

28 Dec 41	Unknown pilots	1-VIG-V	2 A6M & 1 A6M damaged
? Jan 42	A.A. Van Rest	1-VIG-V	1 floatplane
10 Jan 42	P.A.C Benjamins	1-VIG-V	1 F1M2 destroyed. Shared with A. Berk
12 Jan 42	unknown pilots	1-VIG-V	2 enemy a/c destroyed & many damaged
12 Jan 42	P.A.C Benjamins	1-VIG-V	1 G4M1 damaged. Shared with C.A. Vonks, B. Winks, A. Berk
12 Jan 42	P.A.C Benjamins	1-VIG-V	1 G4M1 damaged. Shared with C.A. Vonck
12 Jan 42	F. Sworts	2-VIG-V	1 Sally damaged
12 Jan 42	A. Deibel	2-VIG-V	2 Ki-27
12 Jan 42	V. Helsdingen	2-VIG-V	1 Ki-27
12 Jan 42	G. Bruggink	2-VIG-V	1 Ki-27
24 Jan 42	A.A. Van Rest	1-VIG-V	1 Zero
24 Jan 42	P. Benjamins	1-VIG-V	1 Zero
24 Jan 42	C.A. Vonck	1-VIG-V	2 F1M2 floatplanes? Shared with A. Berk, A.A.M. Van Rest, K.O.G. Funnerman, Th.J. de Waardt
? Feb 42	G. Bruggink	2-VIG-V	1 A6M
19 Feb 42	V. Helsdingen	2-VIG-V	1 Zero
19 Feb 42	G. Bruggink	2-VIG-V	1 Zero
21 Feb 42	H.H.J. Simons	3-VIG-V	1 Ki-43
21 Feb 42	P. Tideman	3-VIG-V	1 Ki-43 (probable)

21 Feb 42	J.P. Adam	3-VIG-V	1 Ki-43
	(by collision)		
24 Feb 42	G. Van Haarlen	1-VIG-V	1 Ki-43
	probable		
1 Mar 42	V. Helsdingen	2-VIG-V	1 Ki-43
2 Mar 42	Unknown	3-VIG-V	1 Ki-43
7 Mar 42	A. Deibel	2-VIG-V	1 Ki-43

Number of Known Kills by Unit

Unit	Number of Known Kills
1-VIG-V	12 kills 3 damaged 1 probable
2-VIG-V	9 kills 1 damaged 0 probable
3-VIG-V	3 kills 0 damaged 1 probable.
Total	24 kills 4 damaged 2 probable

Santiago A. Flores (SAFCH #588), USA

Sources and References

1. Air To Air: The Story Behind the Air to Air Combat Claims of the RNZAF, by Chris Rudge. Adventure Air New Zealand. 2003.
2. Buffaloes over Singapore, by Brian Cull with Paul Sortehaus and Mark Haselden. Grub Street Books, London, UK. 2003.
3. Hurricanes over Singapore, by Brian Cull with Paul Sortehaus. Grub Street Books, London, UK. 2004.
4. Aces High, by Christopher Shores and Clive Williams. Grub Street Books, London, UK. 1994.
5. Aces High: Vol. 2, by Christopher Shores. Grub Street, London, UK. 1999.
6. Those other Eagles: A companion Volume to Aces High, by Christopher Shores. Grub Street, London, UK. 2004.
7. F2A Buffalo in Action, by Jim Maas. Aircraft No.81, Squadron/Signal Publications. 1987.
8. Brewster F2A Buffalo, by Andrzej Bieganski. Kagero Publications No.2. Lublin, Poland. 2003.
9. Brewster Buffalo, by Phil Listermann, Aero Journal Hors-Serie No.7, France. 2004.
10. Brewster 339E Buffalo: the Luckless Defender of Singapore, by Jarmo Nikkonen. AAHS Journal, Summer 1998. USA.
11. Bloody Shambles: Vol.1 and Vol.2, by Christopher Shores and Brian Cull with Yasuho Izawa. Grub Street, London, UK. Vol. 1 (1992) Vol. 2 (1993).
12. Victory List No.7: RAF 400 series squadron credit for the destruction of enemy aircraft in air to air combat World War 2, by Frank Olynky. USA. 1989.
13. NEIAF: The story of an unusual air force, by Gerard Casius and Peter Boer. Air Combat, March 1975, May 1975, and July 1975. USA.
14. Commonwealth Buffalo Squadrons in Southeast Asia. Annals of the Buffalo, web-site at www.warbirdforum.com/malaya.htm
15. Flight Sgt. Bragh: Brewster Buffalo pilot. Annals of the Buffalo, web-site at www.warbirdforum.com/bargh.htm
16. Brewster Buffalo in Dutch Service, by Paul Andriessen. Annals of the Buffalo, web-site at www.warbirdforum.com/dutch.htm
17. Remember the ML-KNIL, web-site at www.rememberthemlknill.tk/
18. The Netherlands East Indies 1941-1942, web-site at <http://www.geocities.com/dutcheastindies/>
19. Le Brewster Buffalo Collection, by Jean Louis Couston. Profiles Avions No.8. Lela Presse, France. 2004.
20. Batailles Aeriennes, No.40: La ruée Japonaise. La conquête de la Malaisie & la chute de Singapour. Lela Presse, France. 2007.
21. Batailles Aeriennes, No.42: La ruée Japonaise. La conquête des Indes Néerlandaises: 1^e partie: Les Japonais s'emparent de Borneo, des Celebes et de Sumatra. Lela Presse, France. 2007.
22. Batailles Aeriennes, No.43: La ruée Japonaise. La conquête des Indes Néerlandaises, 2^e partie: Les Japonais à l'assaut de Java. Lela Presse, France. 2008.

The Pipers of Katanga

Leif Hellström

The air force of the break-away republic of Katanga was a major user of single-engine Piper aircraft of different types. In all of Africa, only Uganda had more Pipers in service.

When formed in August 1960, the Aviation Katangaise (or Avikat) took over most of the aircraft which had previously belonged to Avimil, the colonial air arm in the Belgian Congo. Only weeks earlier, on Congolese independence, Avimil had passed to nominal Congolese control. At the time, Avimil included two newly delivered Piper L-18C Super Cubs, serialised P 61 and P 62. However, although the bulk of Avimil passed into Katangan hands, the two Super Cubs were actually shipped to Ruanda-Urundi where they continued to serve with the Belgian forces. Ever since, it has erroneously been reported that one or both went to Katanga but that is quite simply not true.

After a few months, the Avikat began expanding by adding new aircraft and new aircrews to those originally taken over from the Belgians. At this time, additional Belgian pilots were engaged, and also the first few pilots from other countries, and these were the ones who soon became known as mercenaries. One of the more senior former Avimil officers was Cap.Cdt. Robert Hirsch who originally hailed from South Africa, and he arranged aircraft purchases through his South African contacts.

The first aircraft added to the Avikat were two Piper Super Cubs and four Piper Caribbeans, which were delivered to Katanga in January 1961, most or all possibly arriving on 18 January. These were all fairly new aircraft, and in some cases straight from the factory. The Caribbean was actually just a variant of the Piper Tri-Pacer, which the Avikat was later also to operate, and collectively the two versions were often simply known as "Tri-Pacers".

The aircraft of the Avikat continued using the numbering system inherited from Avimil, and the Super Cubs therefore became KAT-61 and -62, reusing the numbers of the Avimil aircraft. The Caribbeans and Tri-Pacers were given a new serial block starting with KAT-71.

At the same time an *Escadrille d'Aviation Légère* (Light Aviation Squadron) was formed within the Avikat, under the command of Cdt. Jean Louis Delcourt, a Belgian pilot who had served in the light aviation section formed within Avimil shortly before independence. Apart from Belgians, the unit at one time or another included pilots from South Africa, Great Britain, New Zealand and Hungary, and possibly other countries as well. The idea was that the Pipers would be used primarily for direct support to the Katangese ground forces. They were used for liaison duties, to transport officers and wounded, for reconnaissance and observation, as light transports and a multitude of other tasks at the front line. The Super Cubs were, however, not used in their traditional role of artillery spotters – for the very good reason that Katanga had no artillery.

The Pipers were not necessarily the best suited for all the tasks but they were adequate and saw much use. One of the Belgian pilots, Leon Libert, usually flew 60 to 80 hours per month on Pipers in the spring and summer of 1961, and apart from him there were perhaps another half-dozen pilots in Light Aviation. The aircraft were maintained by Katangese mechanics, trained by the Belgians and supervised by Italian technician Vincenzo Di Bartolomeo.

The Pipers were also at times used as strike aircraft, either by simply having a passenger firing a machine gun out the window or by dropping hand grenades. The grenade pin would be removed and the grenade placed in a beer glass, which was then placed ready for use in a box with other similar "bombs". Leon Libert recalls that this arrangement was not without its risks:

It happened to me with a Tri-Pacer. The guy had a box in the back and we took the door off. I started to take off but the runway was bumpy and one glass broke. He threw the whole goddamn box out and we just about lost our tail: that Tri-Pacer was torn up in pieces.

Although the Avikat had its main base at Luano airport in the Katangan capital Elisabethville, the

Pipers were mainly operated in the north of Katanga, where most of the fighting took place. Aircraft and pilots tended to stay attached directly to specific army units for extended periods. As an example, an operational order issued for Operation "Lotus", a ground offensive against Congolese forces in the vicinity of Senterly in June 1961, mentioned that Caribbean KAT-72 from the Kongolo sector would be available to carry out observation flights for the task group.

The Pipers were also used as trainers in Elisabethville to some extent and a few Katangese pilots were trained, although none of them reached full proficiency. Lt. Jean-Marie N'Gosa, later to become nominal commander of the Avikat, soloed in a Super Cub in March 1961.

Additional Pipers were added after a few months. Two genuine Tri-Pacers (not Caribbeans) arrived in March 1961, with two more following in May. One additional Super Cub was taken on charge sometime in this period, with two final Super Cubs arriving in July 1961. The final tally in 1961 was thus five Super Cubs, four Caribbeans and four Tri-Pacers.

There was also some attrition, although full details are unfortunately not known. Libert had an accident with Caribbean KAT-74 around March 1961, in the hills between Manono and Mitwaba. The engine quit and he had to force land, ending up upside down. His passenger was slightly injured and was very worried about them being captured and tortured by the rebels, but the Piper luckily came down just outside the rebel area and they were rescued by a Katangan army column. The wrecked aircraft was abandoned.

Tri-Pacer KAT-77 was damaged during an air display at Mitwaba on 30 June 1961, when it hit a tree with one wing when making a simulated forced landing on the road outside the hotel where some spectators were gathered. The damage was not great but the pilot, Lt. "Max" Glasspole, was the subject of an inquest since this was by no means his first accident. One United Nations report stated that he had crashed no less than six times, which was no doubt an exaggeration. However, it is quite possible that Glasspole crashed one or more of the Avikat Pipers that remain unaccounted for.

Avikat operations continued through the summer of 1961, even if they slowed down after May when most of Katanga had been "pacified". Some Pipers

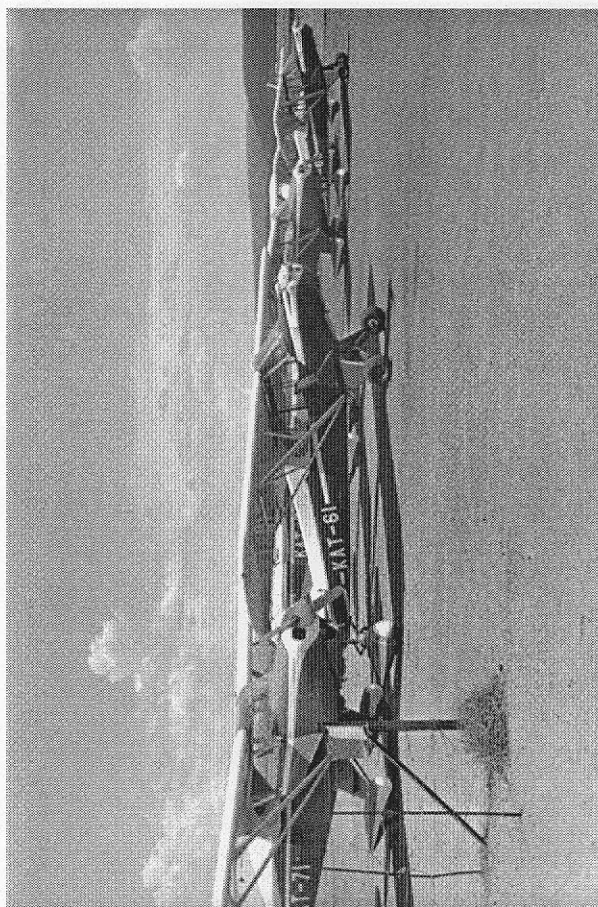
remained stationed out in the bush, but there were always a number of them at the main base in Elisabethville, either for maintenance or simply because there were not enough pilots or missions for all of the aircraft.

On 28 August 1961, the UN forces in Katanga launched Operation "Rumpunch", to arrest and deport the mercenaries working for Katanga. The majority were captured and this in effect paralyzed the Avikat. The majority of its aircraft were collected at Elisabethville, where they were not initially impounded but still unusable due to the lack of crews. However, when the UN launched Operation "Morthor" on 13 September and fighting broke out with Katangan forces in Elisabethville, all aircraft at airfields under UN control were immediately seized.

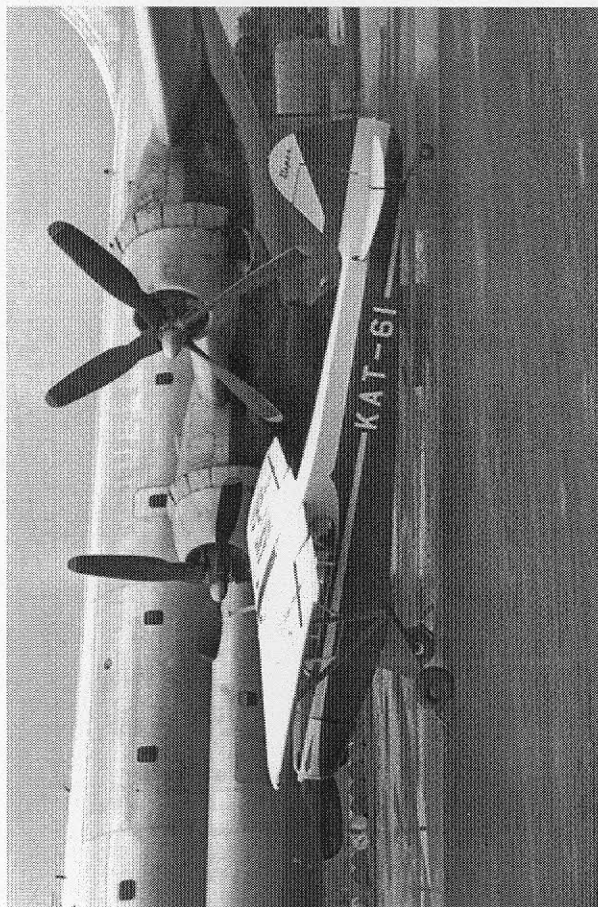
On the day of Operation "Morthor", Katangan President Tshombe temporarily fled to Northern Rhodesia (currently Zambia). According to a former Avikat pilot, Tshombe was picked up by an Avikat Tri-Pacer that landed on a road in Elisabethville and flew him out of the country.

A few aircraft and pilots escaped the initial round-up, due to being out in the bush at the time. One of these was Leon Libert at Kongolo. It was hard to get accurate news, and no orders were coming through, so in the end Libert decided to fly down to Elisabethville to find out what was going on. He did not know that the remains of the Avikat had relocated to Kolwezi. On approach to Elisabethville, he called the tower and was asked by the surprised controller if he really wanted to land there, considering that the UN was all over the place. "They were trying to save my butt all the way; they were Belgian people in the tower." When landing his Tri-Pacer, Libert was told by the tower to park over on the side and somebody was sent out to pick him up. On the way out of the airfield, they had to pass a UN guard. Libert, who was in Katangan uniform, saluted and was saluted back. Once out the gate, the Belgian guide told him in no uncertain terms to get rid of the uniform, after which Libert went into hiding with false papers, but soon rejoined the Avikat.

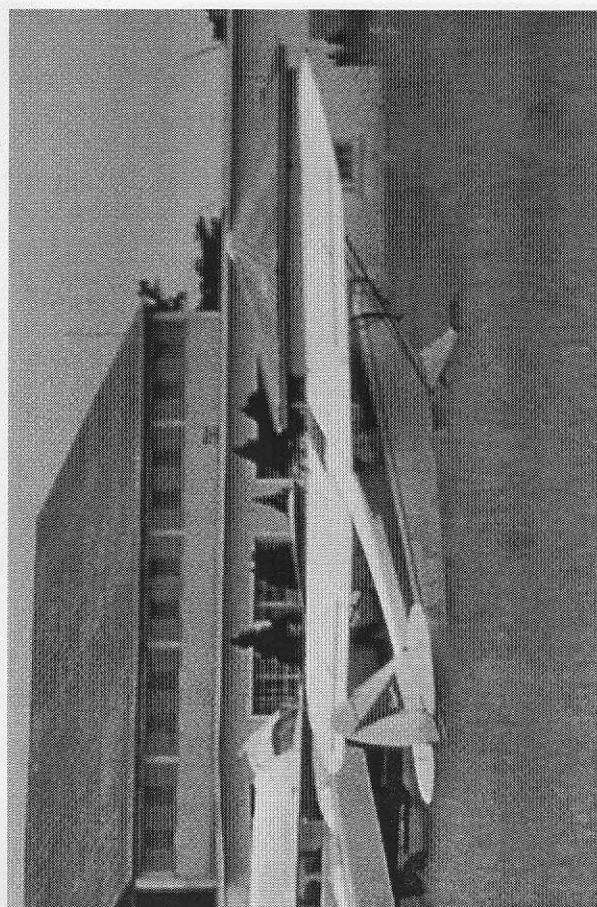
In all, the UN impounded four Avikat Super Cubs, one Caribbean and three Tri-Pacers at Elisabethville, with one additional Tri-Pacer impounded at Albertville. However, the Avikat soon regained one of the Super Cubs (KAT-63), under some what farcical circumstances. On 18 September



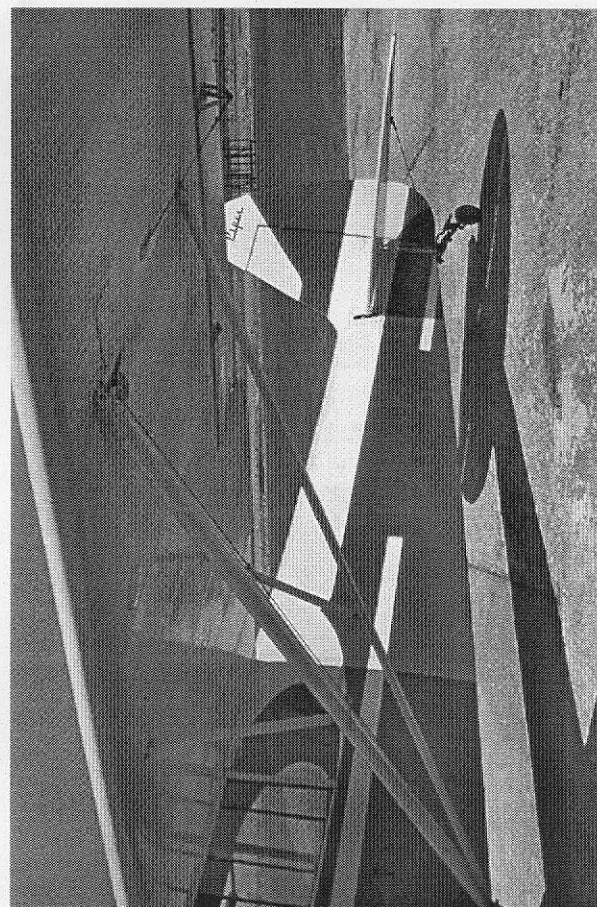
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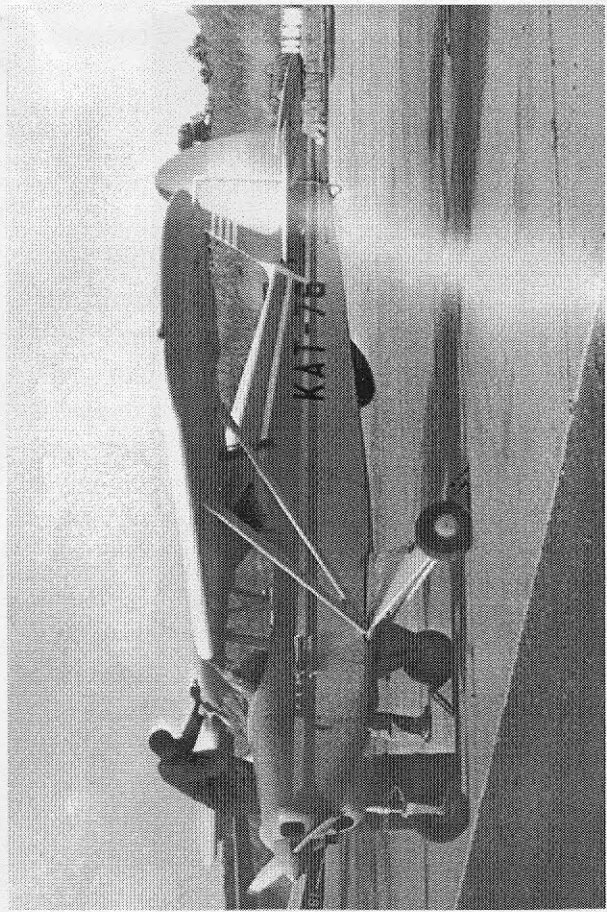
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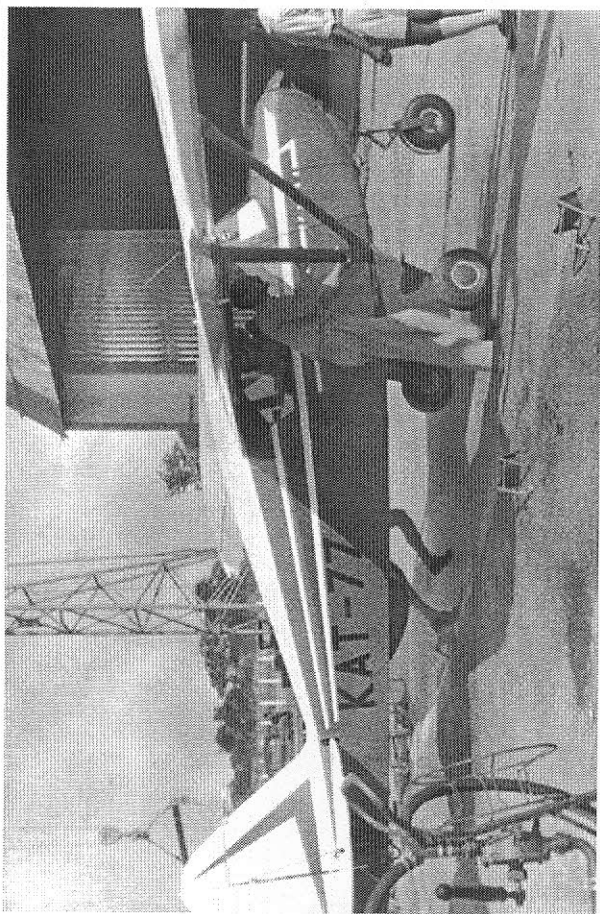
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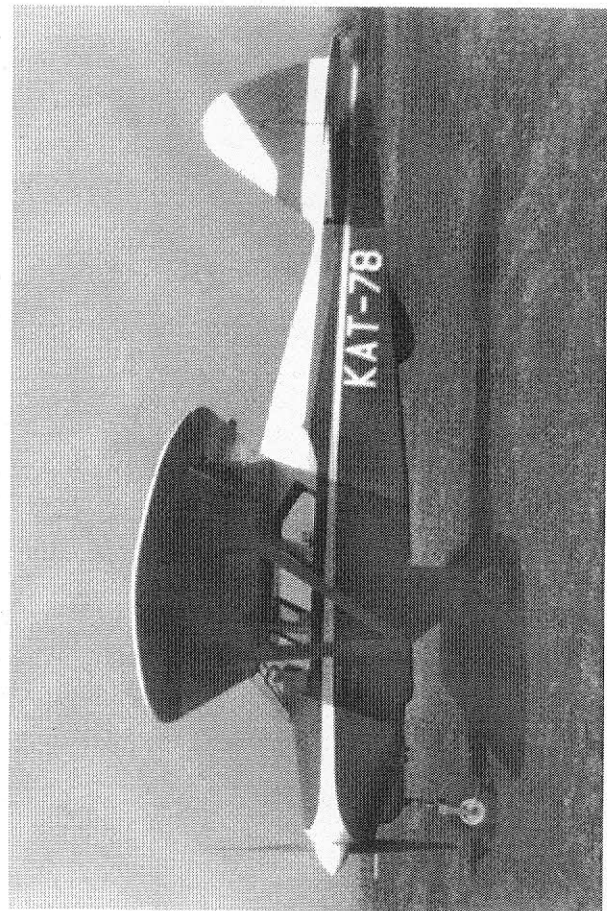
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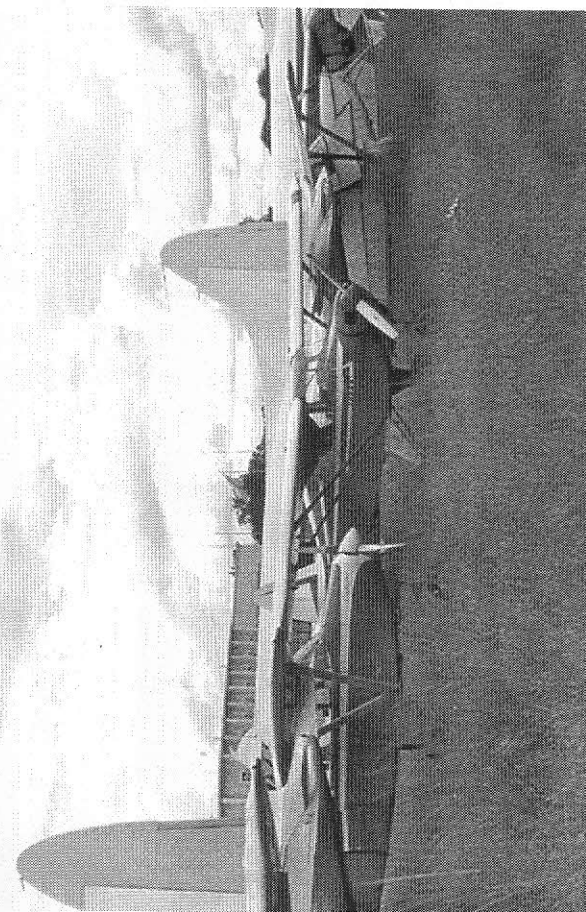
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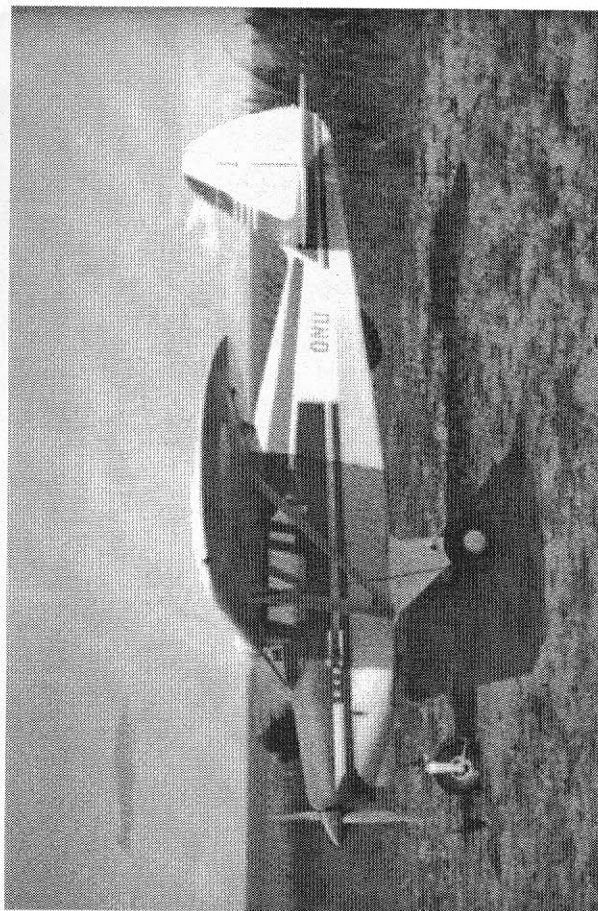
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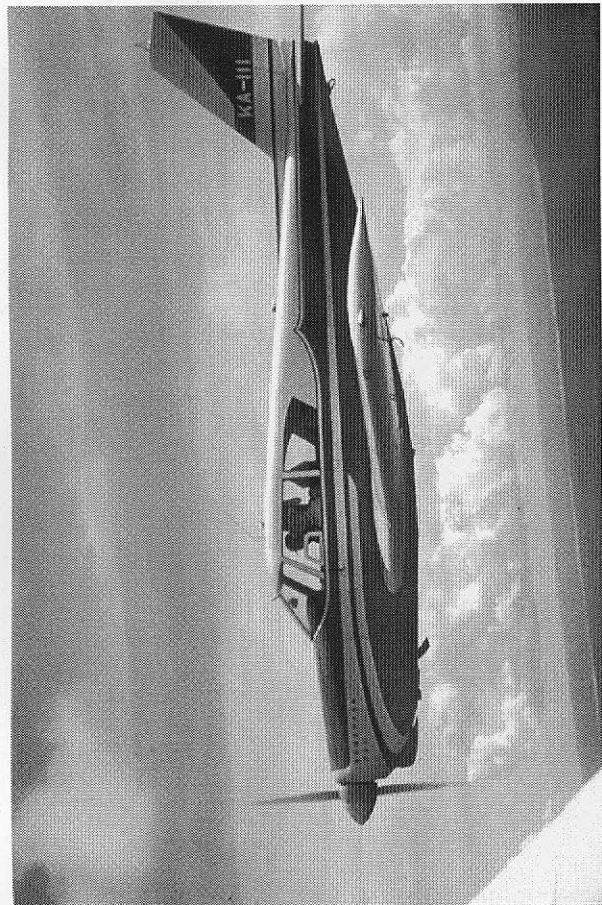
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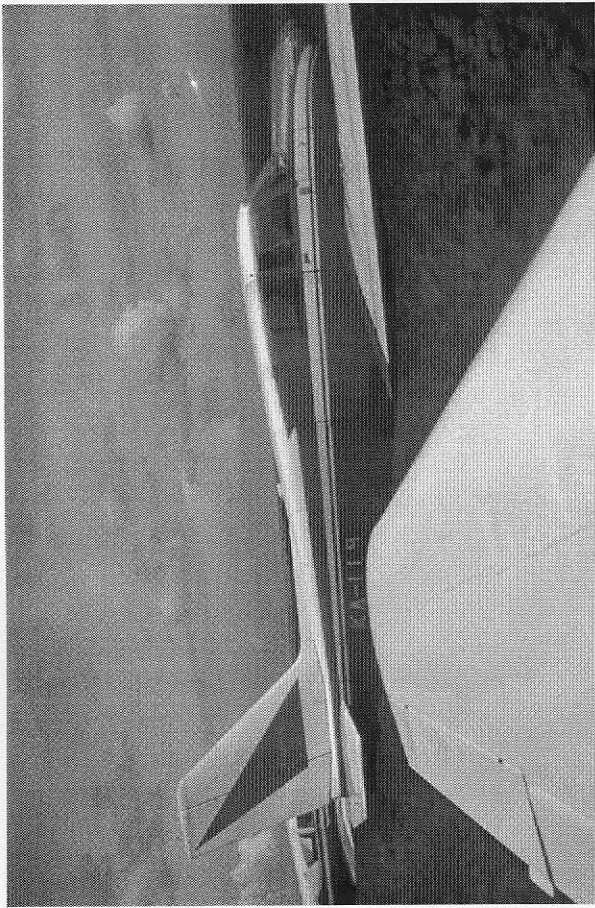
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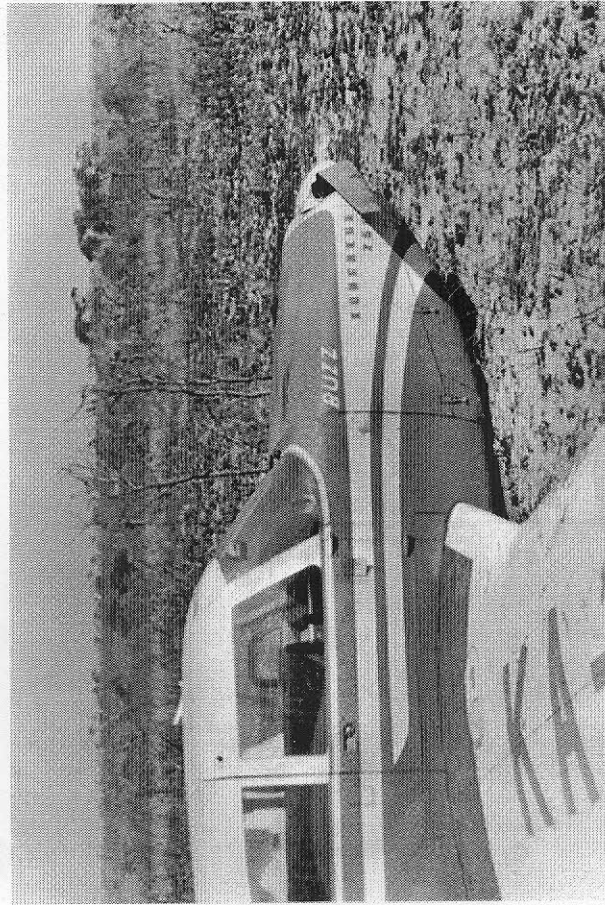
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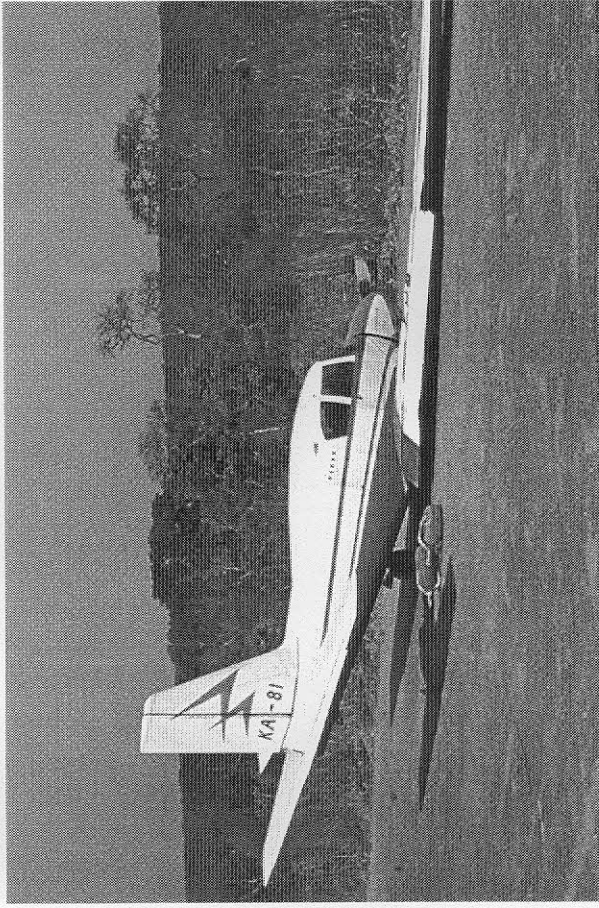
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Pipers of Katanga

Serial	Type	C/n	Previous IDs	Served from/to	Remarks
KAT-61	Super Cub	18-7424*	(new)	Jan 61/c.Aug 61	Fate unknown. Presumed written off in accident.
KAT-62	Super Cub	18-7438	(new)	Jan 61/13 Sep 61	Intermed by UN at Elisabethville. Remains still there 1966 and eventually scrapped.
KAT-63	Super Cub	18-7491*	N3796Z, ZS-CTD*	61/Jan 63	Escaped to Angola; still at Luanda in 1965 and most likely eventually scrapped there.
KAT-64	Super Cub	18-7618*	ZS-CTH*	Jul 61/13 Sep 61	Intermed by UN at Elisabethville. Remains still there 1966 and eventually scrapped.
KAT-65	Super Cub	18-7632*	ZS-CTI*	Jul 61/13 Sep 61	Intermed by UN at Elisabethville. C/n 18-7632 later to 9Q-CAO.
KAT-71	Caribbean	22-7594*	(new)*	Jan 61/Mid 61?	Fate unknown. Presumed written off in an accident.
KAT-72	Caribbean	22-7561* N3663Z*		Jan 61 Jan 63	Escaped to Angola. Still at Luanda in 1965 and most likely eventually scrapped there.
KAT-73	Caribbean	22-7587	N3716Z	Jan 61/13 Sep 61	Intermed by UN at Elisabethville. Later to 9Q-CWM.
KAT-74	Caribbean	22-7217*	ZS-CNM*	Jan 61/c.Mar 61	Crashed between Manono and Mitwaba by Leon Libert after engine quit.
KAT-75	Tri-Pacer	22-4638	ZS-CFO	Mar 61/13 Sep 61	Intermed by UN at Albertville. Eventual fate unknown.
KAT-76	Tri-Pacer	22-5484	ZS-CHW	Mar 61/13 Sep 61	Intermed by UN at Elisabethville. Probably left in place and eventually scrapped.
KAT-77	Tri-Pacer	22-3603	ZS-CCS	May 61/13 Sep 61	Intermed by UN at Elisabethville. Later to 9Q-CWL.
KAT-78	Tri-Pacer	22-5136	ZS-CCG	May 61/13 Sep 61	Intermed by UN at Elisabethville. Later to 9Q-CWO.
KA-81	Comanche	24-452	N10F, ZS-CKS	Jan 62/16 Jul 62	Crashed at Lubudi by Peter Wickstead after running out of fuel. Wreck crated and taken to Angola. Still at Luanda in 1965 and most likely eventually scrapped there.
KA-111	Comanche	24-2281	N10F, ZS-CRC	Jan 62/8 Jul 62	Named "BUZZ". Crashed at Kolwezi-Kengere by Roger Bracco. Remains destroyed by UN air attack 29 Dec 62.
KA-119	Comanche	24-2341	N10F, ZS-CRF	Jan 62/Jan 63	Escaped to Angola. Still at Luanda in 1965 and most likely eventually scrapped there.

For aircraft marked * the link between serial and construction number is uncertain.

1961, two officers of the Swedish UN battalion "borrowed" one of the impounded Super Cubs to perform a reconnaissance mission near Elisabethville but promptly got lost. They eventually landed at N'Dola in Northern Rhodesia, where the aircraft was impounded by the local authorities and handed back to Katangan control. To avoid any possible complications over having a white mercenary pilot collecting the aircraft, Capt. (by this time) N'Gosa was sent down to fly the Piper home to Katanga, where it was incorporated back into the Avikat.

The Avikat was estimated in a US report from October 1961 to have three or four Pipers in service. If this is correct, it is possible that Super Cub KAT-61 or Caribbean KAT-71, which remain unaccounted for, did survive this long only to be lost soon afterwards. More likely, however, they had been written off at some earlier date.

By late 1961, it is almost certain that the Avikat's Piper establishment had been reduced to just two aircraft: Caribbean KAT-72, which had been at Kisenge when the UN impounded the other aircraft, and the regained Super Cub KAT-63. The Escadrille d'Aviation Légère had ceased to exist and the two survivors continued in service mainly as liaison aircraft, most of the time at Kolwezi-Kengere which was the new Avikat main base.

The Avikat lost additional aircraft in the UN air attacks on Kolwezi in December 1961. One Piper Cub was also destroyed in these attacks and it has sometimes been assumed that this was an Avikat aircraft, but it was in fact a civilian Cub registered 9Q-CDF. The two remaining Avikat Pipers survived the attacks, likely by being elsewhere at the time.

However, Caribbean KAT-72 was soon thereafter involved in an accident at Kipushi, reputedly while flown by Hungarian pilot Sandor "Sputnik" Gyurkits. It is possible that it was involved in some kind of collision with Avikat Do 28 KA-017 but details are unclear. On 13 February 1962, the wreck was collected by truck and removed to Northern Rhodesia for repair.

The Avikat had meanwhile received some additional Pipers, this time low-wing Comanches. They had been bought in South Africa through the Pretorian Light Aircraft Co. (PLACO) in South Africa, who reputedly had also supplied the earlier Pipers. Three Comanches were bought, all used aircraft, and they were ferried through Northern

Rhodesia to Kolwezi by Avikat pilots in early January 1962. Katanga supposedly paid a very high price for the aircraft, as some crooked dealer is said to have convinced President Tshombe that they were in fact fighter aircraft.

By 1962 the UN had built up its intelligence organization and had a much more detailed insight into the Avikat's operations than a year earlier. The arrival of the Comanches was detected in short order, and a bit later their previous identities were also discovered. They were not seen as much of a threat, however. The British Consulate in Katanga lamented the success of "various adventurers" to talk Katangan officials into buying useless aircraft at exorbitant prices. "The purchase of Comanches seems to have been an example of such a waste of money."

One of the Comanches was given the serial KA-81, thus continuing in the previous tradition of giving a new serial block for each new type. (The earlier KAT prefix had by this time usually been abbreviated to just KA, probably to look more like a normal civilian nationality prefix.) However, the other two Comanches were serialised KA-111 and -119, perhaps in an attempt to confuse the UN about the number of aircraft at hand. There have been a number of reports of a Comanche serialised KA-82, including contemporary UN reports, but for certain this number was never carried by any Avikat aircraft.

It has also been claimed that two of the Comanches had the civil registrations KA-TAB and KA-TAC but, once again, these registrations were certainly never painted on the aircraft. Possibly they were used as call-signs but even this seems doubtful.

The Comanches were used for liaison and light transport duties, but do not appear to have been used for the more war-like tasks of their predecessors. Their low-wing configuration did of course make them less suitable for direct army co-operation. Also, there was a lull in military operations for most of 1962 and from May to August that year most Avikat aircraft were in fact under nominal civilian control.

Two of the Comanches were lost in July 1962 already, after only six months' service. First to go was KA-111, which was crashed near Kolwezi-Kengere airfield on 8 July by Belgian pilot Roger Bracco. The aircraft was substantially damaged, one wing being shredded, but there were no serious personnel injuries. The wreck was left at Kolwezi. On 16 July, KA-81 made an emergency landing at Lubudi after

running out of fuel, wiping off most of its undercarriage, while piloted by British pilot Peter Wicksteed. This time the aircraft was salvaged, crated and in due course shipped to Angola for repairs.

On the other hand, Caribbean KAT-72 was test-flown at Lusaka, Northern Rhodesia, in July 1962 after being repaired although it apparently did not return to Katanga until around September.

The Avikat thus ended 1962 with one each of the Piper types still in service: Super Cub KAT-63, Caribbean KAT-72 and Comanche KAT-119. From the time the UN in the Congo received SAAB S 29C reconnaissance aircraft in November 1962, they kept a constant watch on the location of all Avikat aircraft. The Pipers were usually reported at Kolwezi-Kengere or Kolwezi-Town.

Late on 28 December 1962, the Avikat got a warning that Kolwezi would be attacked by UN aircraft the following morning. Many aircraft were therefore flown out to safety in or near Angola at first light on 29 December, apparently including Comanche KA-119. The Super Cub and the Caribbean were evidently also stashed in some safe location but seem to have remained in the vicinity of Kolwezi. When the UN SAAB J 29s struck Kolwezi-Kengere later that morning, the only Piper hit was the wreck of Comanche KA-111.

The days of the Avikat, and indeed of Katanga, were almost numbered. In late 1962, the UN ground forces began to advance on the remaining Katangan strongholds, including Kolwezi. A few reconnaissance missions were flown with the remaining single-engine Pipers in what may well have been the last operational sorties of the Avikat. On 3 January 1963, the Super Cub was sent to reconnoitre the location of the UN column advancing towards Kolwezi. The pilot was South African Erald "Flynn" Kingman. Fellow pilot Jimmy Hedges later wrote that he saw Kingman doing many brave things, including this day when he was "going on a low level recce over the U.N. lines in a Super Cub, loaded down with 9 magazines, a 9 mm automatic pistol, a pocket Verrey pistol, a Walkie-talkie set, first-aid field pack and a flask of coffee."

That day the Piper was in fact spotted by two UN J 29s on patrol, as described by Swedish UN pilot Gilbert Casselsjö:

While stationed in Elisabethville I came upon a Super Cub which I ought to have shot down, as we had standing orders to shoot at all [Katangan] aircraft in flight. We turned in towards him and he saw us of course. He shot off red signal flares: it was obvious that he was in peril! But I thought that one couldn't simply shoot him down just like that. And he couldn't do much harm with a Super Cub either, really. So we just passed close to him and shook him up a bit.

The Super Cub returned safely to Kolwezi with a thoroughly "shook up" pilot. Soon afterwards it, too, was flown out to Angola.

In his memoirs, one-time Avikat commander Jerry Puren states that he and his wife took off in a Tri-Pacer from the small Kolwezi-Town airfield at dawn on 23 January 1963, just as the first UN vehicles were approaching the airfield, and flew to Angola to join the rest of the Avikat in exile there. In fact, Kolwezi fell to the UN troops on 21 January already, and the last aircraft out is believed to have been a DC-3. Also, another Avikat pilot by the name of José Magain claims to have used the last Tri-Pacer to escape to Angola.

Puren's story may have been exaggerated for dramatic effect but Piper Caribbean KAT-72 was certainly among the aircraft that escaped to Angola and it may well have made one of the very last flights of any Avikat aircraft from Katangan soil.

After arriving in Angola, the Avikat remained in existence in exile for a few weeks but on 19 February 1963 the Portuguese authorities impounded all the aircraft and the Avikat was effectively disbanded. The three Pipers ended up at the main Portuguese air base at Luanda where they were stored outdoors. Some reports claim that the Super Cub was crashed by a Portuguese pilot but that is untrue. All three Pipers were still at Luanda in July 1965, at which point they were inspected by a Belgian officer with a view to repatriating the aircraft to the Congo. They were found to be in too poor a condition for this to be economical, however, and all three were presumably scrapped by the Portuguese some time later.

The Pipers impounded by the UN in 1961 were officially handed over to the Congolese Government in February 1964. The three Super Cubs were all in poor condition but one of them in due course ended

up on the Congolese civil register while the other two rotted away at Elisabethville airport. The Caribbean at Elisabethville had been kept in good condition by a UN mechanic and this and two of the three Tri-Pacers ended up on the civil register with the WIGMO Flying Club in Leopoldville: a recreational club for the personnel serving the CIA combat aircraft in the Congo. The third Tri-Pacer, listed as being in poor condition, was presumably broken up for spares.

There is some mystery over the fate of KAT-75, the Tri-Pacer impounded at Albertville by the UN. It was kept in flying trim and was even flown by UN personnel on a number of occasions. Their request to have the aircraft officially incorporated into the UN air unit was denied by UN Headquarters, however. The Tri-Pacer was listed as "serviceable" when officially handed over to the Congolese in February 1964 but is not known to have been registered anywhere subsequently, nor was it used by the Congolese forces.

Painting and Markings

All the Katangan Pipers retained civilian colour schemes and none carried any roundels or other national insignia. All had white wings.

The first three Super Cubs, KAT-61 to -63, had fuselages painted blood red with white trim. The serials were carried in white on the fuselage and most likely in red on top of the right wing and under the left wing. Super Cubs KAT-64 and -65 had white fuselages with red trim. The serials may have been black or red: there is no photo evidence.

The four Caribbeans, KAT-71 to -74, had emerald green fuselages with white trim. The serials were white on the fuselage and green on top of the right wing and under the left wing. The name "Caribbean" was carried on the nose. KAT-72 later had changes to the white trim on the nose, probably while being

repaired in Northern Rhodesia, and may have been completely repainted, possibly in another colour. It appears to have retained its original serial number positions, however.

The four Tri-Pacers had more varied colour schemes. KAT-75 was white with metallic blue-green trim, KAT-76 white with mauve trim and KAT-77 bright red with white trim. All three likely had black serials on their fuselages. KAT-78, on the other hand, had its fuselage painted just like the Caribbeans except for the name on the nose. It is uncertain if any of the Tri-Pacers carried serials on their wings; at least none are visible under their wings in available photos.

All the Pipers impounded by the UN had their serial numbers removed almost immediately. Super Cub KAT-63, which was returned to Katangan service, was in 1962 seen in Avikat use without any markings so most likely these were never reapplied. Tri-Pacer KAT-75 used by the UN also had its Avikat serials removed and instead carried the text "ONU" in small blue letters on the fuselage sides.

The Comanches all had different colour schemes due to their different vintage. KA-81 was white with French blue trim. The serial was carried on the fin and on top of the right wing in black. Aircraft KA-111 was dark green with white trim, a white serial on the fin and a dark green serial on top of the right wing. It also carried the name "BUZZ" in white on the right-hand side of the nose only. KA-119, finally, was tomato red with white trim, a white serial on the fuselage and a red serial on top of the right wing. It is not known for sure whether the Comanches had any serial painted on their undersides, although available photos do seem to indicate that they did not.

Leif Hellström (SAFCH #786), Tullinge, Sweden;
e-mail: leif@leifhellstrom.com

Captions for photos on pages

1. A line-up of Katangan Pipers, most likely in connection with the first delivery in January 1961. In front are red and white Super Cubs KAT-61 and -62, and behind them green and white Caribbeans KAT-71 through -74. (Via Dave Becker)
2. Super Cub KAT-61 at Luano Airport in Elisabethville, in the spring of 1961. The serial number (most likely painted in red) is visible on the top wing. Boeing YC-97 N9540C in the background was impounded at Elisabethville after bringing three Fouga Magisters to the Avikat. (Swedish Army)
3. This is either KAT-64 or KAT-65, seen at Elisabethville in late 1961 or 1962 after being interned by the United Nations forces. The Katangan serial numbers were removed almost immediately by the UN. (Lars Thomasson)
4. KAT-63 was interned by the UN but ended up back in Avikat service within weeks. In this photo from 1962, the serial number is still visible on the fuselage despite being painted out in red, likely during UN internment. (Jimmy Hedges via Dave Becker)

5. Piper Caribbean KAT-72 on a mission to Kongolo in northern Katanga in 1961. The other Caribbeans looked identical. On the left is Armand Traweels, with the Katangan ground forces, and on the right is Avikat pilot Jacques Demoulin. (Thiery Cuvelier via J-P Sonck)
6. KAT-72 again, this time at Mitwaba in April 1961. Although not a very good photo, it shows the position of the serial on the top, right wing. (J J Mans via J-P Sonck)
7. Caribbean KAT-74 was one of the first Avikat Piper casualties, if not the very first one. The aircraft crashed in the bush after engine failure. The under-wing serial number on the Caribbeans, likely painted green, is shown to advantage. (Leon Libert)
8. Tri-Pacer KAT-76 had a decidedly unmilitary colour scheme, being painted white and mauve. (Via Dave Becker)
9. The brightest of the Avikat Tri-Pacers was without doubt the red and white KAT-77, seen here at Elisabethville in 1961. Holding the wing strut is mercenary pilot Jerry Puren. (Via Dave Becker)
10. Tri-Pacer KAT-78 had an identical colour scheme to that of the Caribbeans, but in this photo seems to be lacking the serial number under the left wing. (Leon Libert)
11. The Avikat aircraft interned by the UN in September 1961 were put out to grass, quite literally. Seen here are KAT-73 and KAT-77, sans markings, with either KAT-64 or -65 at the far end. Stinson Voyager OO-CEV standing in between was a purely civilian aircraft interned by mistake. (Kjell Magnusson)
12. A single Tri-Pacer, KAT-75, was also interned at Albertville. It was given discrete "ONU" markings, although still technically an Avikat aircraft at the time, and was sporadically flown by UN pilots in 1962-1963. (William Appelquist)
13. A nice in-flight view of Comanche KA-111, probably snapped during the delivery flight from South Africa. (Jimmy Hedges via Dave Becker)
14. The tomato red KA-119, also seen during the delivery flight. The delivery of the three Comanches was made in formation. (Jimmy Hedges via Dave Becker)
15. A close-up of KA-111 after its accident on 8 July 1962. Note the name on the cowling and also the position of the serial number on the wing. (Jimmy Hedges via Dave Becker)
16. The last Piper casualty of the Avikat was the blue and white Comanche KA-81, which made a forced landing at Lubudi on 16 July 1962 after running out of fuel. The nose gear and right-hand main gear were sheared off in the process. (Jimmy Hedges via Dave Becker)

The Mongolian Air Force in the Nomonhan Conflict

[Editor's note: The following is an excerpt from Lela Presse's *Batailles Aeriennes* #50 that is reviewed elsewhere in this issue of SAFO. It describes the activities of the Mongolian Air Force during July 1939, and is reproduced here with the permission of the Michel Ledet, the publisher. The translation is by my sister, Sandra Schachter.]

Although the war was taking place in Mongolia, the small air force of the People's Republic of Mongolia took almost no part in the fighting. While Mongolian ground troops took part in operations from the beginning of the conflict, Mongolian aviators joined them only in mid-July. Badly trained and just as badly equipped, the Mongolian pilots were fortunately spared from serious combat. Their old Polikarpov R-5's could safely be used only on night missions and it was impossible to staff since their pilots were trained only for daytime flights.

Therefore, some time was necessary to reorganize this little air force. Finally, a small group of 8 planes was put into service, having at its head a pilot named Bor. Not being able to make up for the lack of trained crew members, Mongolian aviation had to rely on Soviet instructors and advisors to join the Mongolian crews. The planes also took on Soviet insignia.

The first night mission of this little unit occurred on July 13 when three R-5's took off from Matad airfield with the lead plane piloted by the Soviet Zaïsanov, a Bouryat (1) who had served for a long time as a technical advisor to Mongolian aviation. The planes operated in the following manner: at sunset, the light bombers left Matad and went to Hamar Dava, an advanced airfield, where they refueled and took delivery of their bombs. Around midnight, the biplanes took off toward their objective.

In order to facilitate the navigation, kerosene lamps were placed along the Khalkhin River, from 3-7 km behind the front line and 500 meters from one another.

At the junction with the Khalkhin River, the chain ended with an arrow indicating the direction to take, the airplanes then following the course of this river up to the enemy's rear lines.

The task of these planes was first to harass the Japanese troops by preventing the soldiers from sleeping. Material damage was not considered a priority. In addition to the demoralizing effect, the noise of the airplane passage and explosions of bombs permitted neighboring troops to reposition themselves if necessary. Each R-5 carried several bombs that it dropped one by one with the planes approached their objective every 10-15 minutes. After the first passage, each R-5 prepared for a second one, and thus each followed suit until exhausting its load. These raids produced real panic when practiced in the Tchintching Sume and Depden Sume sectors, on about 15 missions.

According to Soviet advisors, the results of the bombardment were relatively good. The great enthusiasm of the Mongolian crews was mentioned in their reports. Up to the end of the campaign, in September, the Mongolian unit flew between 158 and 165 sorties, dropping some 60 tons of bombs on the enemy positions. Only one loss was registered, and that because of bad weather. The crew, composed of the Soviet pilot Komendantov and the Mongolia radioman Luvsandagva died in the accident.

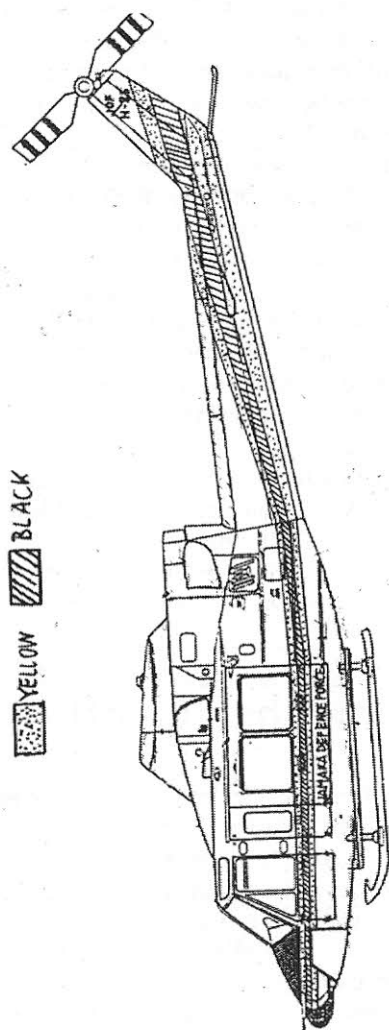
(1) The **Buryats** are the largest ethnic minority group in Siberia and are mainly concentrated in their homeland, the Buryat Republic, a federal subject of Russia. They are the northernmost major Mongol group.

Small Air Force Bell 412

Nils Treichel

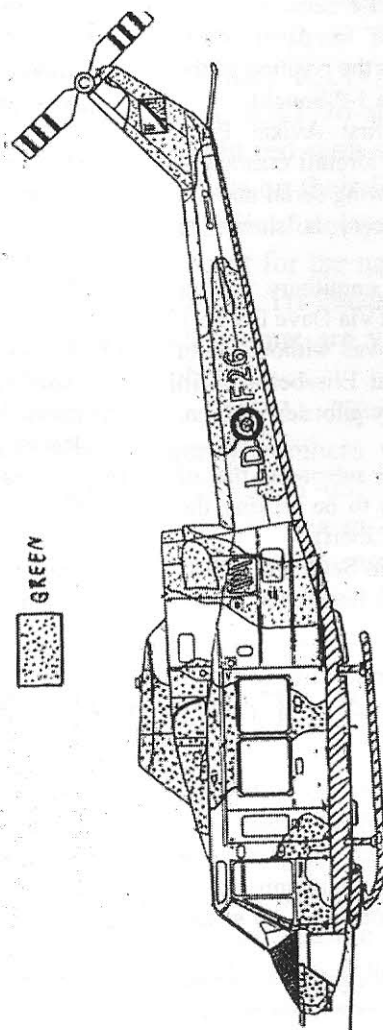
Jamaica Defence Force Air Wing, 2nd Flight, AB Kingston/Up Park Camp, ca. 2004

Dark Green over all with Yellow/Black/Yellow fuselage stripes. All lettering and rims of side windows White. Landing skids Natural Metal (note additional step). Winch on starboard side. Tail rotor is White with three Black stripes. Main rotor blades are Light Grey with Yellow tips (This is valid for all choppers described here)



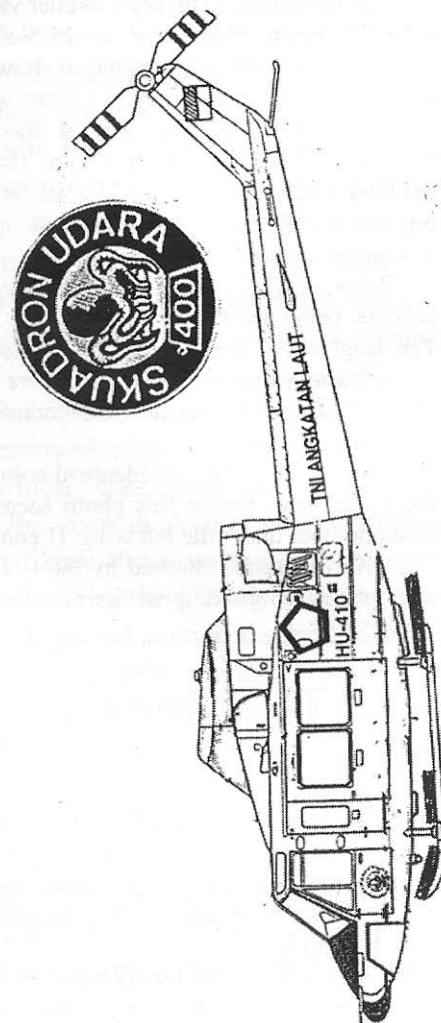
Lesotho Defence Force Air Wing, AB Maseru, late 1990s

Top is Grey with Green camouflage (looks quite like RAF colours!). Bottom Very Light Grey, nearly Ivory, including landing skids. Letters are White. Window borders are White. National roundel is Blue (Outer)/White/Light Green. Flag on fin is White (Top) and Green, divided by a Blue line and with the governmental seal in the top left corner. Same antenna as Guyana chopper and no radar nose.



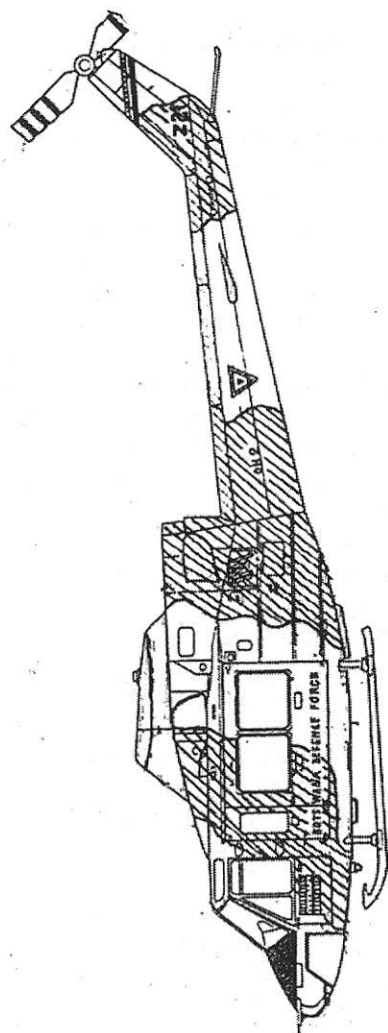
Indonesian Navy Air Arm, Squadron 400, AB Juanda, October 2007

Light Grey over all, all markings, including national insignia, Dark Grey. Squadron badge is Light Grey octopus on Blue circle with Red surround and Yellow letters. National flag on tail is Red over White. Note flotation bags on lengthened landing skids.



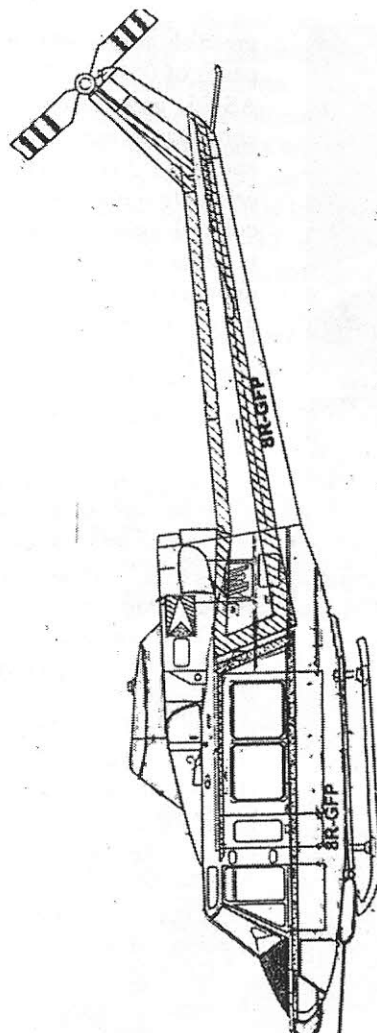
**Botswana Defence Force, Squadron Z21,
AB Molepolole, 2000**

Sand with Green stripes over all surfaces, skids Sand, window borders are White (inner) and Black. All lettering Black. Blue (outer)/White/Black triangle on fuselage. Blue (top)/White/Black stripes on fin, rectangle on cockpit doors is drawn in detail. No radar nose



**Guyana Defence Force - Air Command,
AB Camp Stephenson/Georgetown,
ca.2004.**

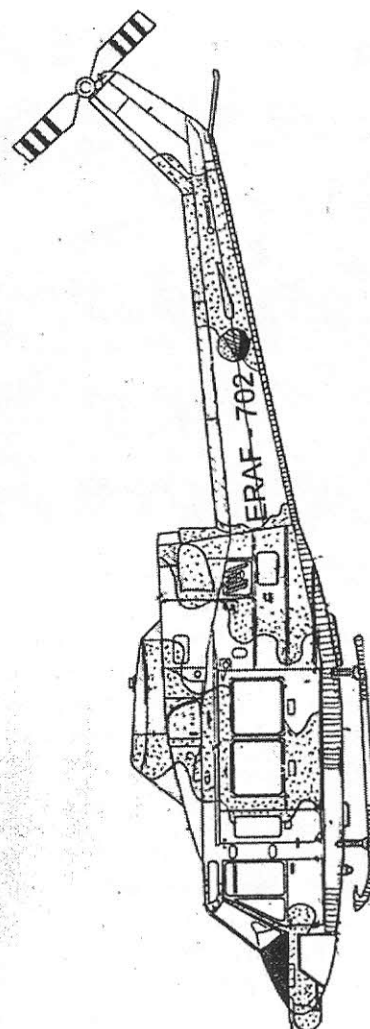
Yellow over all with Green and Red areas. Registration is Black. Window borders same style as Eritrean A/C. National flag on engine cover is red/yellow/green (from right to left). Skids are Natural Metal. Note long horizontal antenna on port bottom, between window and landing gear, and additional entrance step. No radar nose



RED GREEN

**Eritrean Air Force, 7 Squadron, AB
Asmara, ca.2000**

Top is Sand with Light OD camouflage. Bottom Light Blue Grey, including landing skids. Window borders are Red with thin white stripe close to windows. Serial is Black. National insignia Green (Top)/Red/Blue with yellow olive branch on Red segment. Winch on starboard side.



Nils Treichel (SAFO #1467)



S-2 Tracker & Turbo Tracker, by Jorge F. Nunez Padin. Serie Aeronaval #26. 36 landscape pages (195 mm by 275 mm), (2009) ISBN 978-987-20557-8-3. E-mail: jfnpadin@yahoo.com.

Jorge continues to update his earlier publications in their new, larger, landscape format with new photos and new color drawing, but with the same Kodak-quality paper.

The latest is an update on the S-2 Tracker & Turbo Tracker. The Argentine navy received 16 Grumman Trackers: 6 S2A (serials 0510 to 0515), one S-2F (serial 0542), 6 S-2E (serials 0700 to 0705), and 3 S-2G (serials 0860 to 0862). Four were converted to Turbo Trackers: serials 0070 to 07073.

The new edition contains 36 pages with 40 color photos including two in full-page size (195 mm by 275 mm) and the remaining 36 four to a page (120 mm by 80 mm). In addition there are 36 black-and-white photos, all but nine of these 120 mm by 80 mm. The color illustrations consists of one 2-page color profile of torpedo-carrying Turbo Tracker 0703/2-AS-24 in

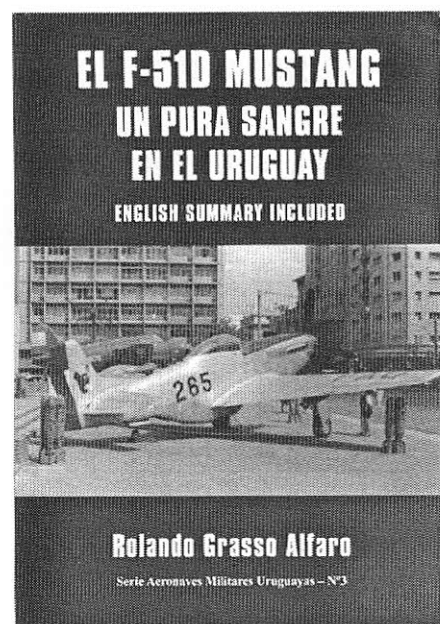
greenish-gray over light gray; four color profile drawings (2 to a page) of 0514/2-AS-4 in medium gray over light gray, 0705/2-AS-26 greenish gray over light gray, 0512/6-G-53 in a complicated camouflage of greenish green and greenish yellow, and 0511/2-G-51 in overall light gray with blue stripes to celebrate the 25 year of Tracker service in Argentina. A 2-page color 3-view drawing shows 0701/2-AS-22 in the standard medium gray over light gray. The color cover is a dramatic drawing of a Tracker launching a torpedo while a Sea King hovers in the background deploying its dipping sonar.

This should be enough to turn on your modeling juices. However, the enterprising modeler may wish to try converting the Hasegawa Tracker into a Turbo Tracker. However, this latter will require some first-class modeling since I doubt if anyone will ever produce resin turboprop nacelles for such conversion.

The Spanish-language text provides much information for the enthusiast interested in the history: *Historia* (8 pages); *Malvinas* (4 pages); *Tecnica* (4 pages); *Historias Individuales* (2 pages); *Colores & Insignias* (2 pages).

The latter chapter includes the FS595 equivalent of the color used by the Trackers including USN *Gris Claro* (FS36440) and *Blanco Mate* (FS37875). The color applied in Argentina are *Gris Oscuro* (~FS36125), *Blanco Mate* (FS37875), *Gris Mate* (FS36231), *Gris Claro Mate* (FS36493), and *Celeste Fuera* (FS15200). For the Turbo Tracker: *Gris Medio Brillante* (~FS161152) and *Gris Claro* (FS 16307). The colors of the camouflage Trackers are give as *Marron* (~FS30219) and *Verde* (~FS34130).

I hope this summary gives enough information to whet your appetite. This is a book that the aviation enthusiasts and the modeler should not miss. Copies are available from the SAFCH Sales Service for \$17.00 in the US and \$20.00 elsewhere.



El F-51D Mustang: Un pura sangre en el Uruguay, by Rolando Grasso Alfaro. Serie Aeronaves Militares Uruguayas – N°3. 187 pages (170 mm by 240 mm. ISBN 978-9974-96-529-4.

This book has been mentioned several times in previous issues of SAFO, however, this is the first time I have seen the book. And, it blew my socks off. It is much better than the short reviews could possibly portray. The reviews mentioned that an English summary is included, but while the first 112 pages are in Spanish the remaining 73 pages are in English. What's more, the 3 color photos and all 188 black & white photos have Spanish and English captions. These photos are large and well-reproduced on glossy paper.

The titles of the English chapters will give you some idea of the completeness of the text. First Part: Origins, Choice and Acquisition, Preparations for Instruction, Pilot Selection, Instruction and Training, and Ferry Flight to Uruguay, Second Part: The First Years of Service, New Pilots are Made, The Argentine Revolution in 1955, The Last Years in the *Grupo de Aviación N°2* (CAZA), and Their Service in the *Grupo de Aviación N° 1* (REC.TÁCT.). Third Part: Sale to the Bolivian Air Force. Fourth Part: Historical Synthesis of Each Aircraft. Fifth Part: Survivors in the Civil Market.

As an example of the thoroughness of the coverage, consider the chapter on the Ferry Flight from California to Uruguay: Most accounts are satisfied with saying the Mustangs were ferried to

Uruguay - period. Rolando lists each Uruguayan pilot who flew the planes and the serial number of his aircraft. Each leg of the journey is described with distance and times; and the many delays and crash landing due to engine failure detailed. This was truly an epic journey that is told with such intimacy that the reader is drawn along on the flight.

I would like to relate another example that reveals the depth of coverage as well as the quality of the translation. During the Argentine Revolution of 1955, "The Uruguayan authorities decided to patrol the border with Argentina; two F-51D were sent to patrol the River Plate coast from Montevideo to Nueva Palmira; these were No. 250 with 2nd Lt. Gabriel Sigillito as section leader, and No. 252 with Ens. Maruri as wingman. It was a rainy afternoon and the visibility was poor. A little after they overflew Colonia, they sighted a high wing aircraft; it was an Argentinian Navy PBY-5A coded 2-P-4; when they crossed, the P-51s made a 180° turn and approached the flying boat from behind causing consternation in the crew that thought they were going to be shot down by loyal Argentinian planes until they saw they were FAU airplanes. The F-51s drove the PBY-5A to Carrasco; the Catalina had a 3-foot diameter hole in its right wing, and an undetached 100 lb demolition bomb under the left wing." [Editor's note: What a great idea for a "dogfight double"- an Argentine PBY and a Uruguayan P-51D.]

There are 6 pages of color drawings: one 5-view, one 3-view, and 5 profiles. The Uruguayan Mustangs were not very colorful, being in an aluminum finish during all their service life. The only embellishments were the spinner that was painted either red, white, or blue. However, the color drawings do show the placement of the national insignia and all the lettering. Also, there is a large color drawing of the "gato y ratón" (cat and mouse) emblem that the modeler can Xerox to make a decal.

Because of the extensive English summary and the plethora of excellent photos, *El F-51D Mustang: Un pura sagre en el Uruguay* is one of the best aviation books to come out of Latin America. It is highly recommended to all aviation enthusiasts.

This book can be obtained from Gary Kuhn who writes:

"I am selling them for \$30 in USA and \$35.00 elsewhere. I have just six left here in the US and can accept payment by PayPal (gkguhn@earthlink.net) or check made out to me. After these six are gone, you can continue to send payment to me and the books will be shipped from Uruguay. Rolando has many in Uruguay and I can get \$ safely to Uruguay.

"The F-80/T-33 will be next. But, first, the F-51 inventory needs to be reduced."

To order, contact Gary Kuhn at the above e-mail address or by snail mail to: Gary Kuhn, 23-D Crusader Ave., East St. Paul, MN, 55118, USA.



Histoire de la JG 52: L'escadre aux 11.000 victoires (1^{re} partie). Batailles Aeriennes #49. Lela Presse, 29 rue Paul Bert. 62230 Outreau, France. E-mail: contact@avions-bateaux.com. Website: www.avions-bateaux.com.

This, the latest in Lela Presse's Batailles Aeriennes series, is to their usual excellent format - a profusion of well-reproduced photos and beautiful color profile drawings. However, there is no small-air-force interest since all the photos and profiles are of Luftwaffe Bf 109s.

The story follows JG 52 from its inception November 1938 to December 1941. The chapters are: "Naissance", "Sitzkrieg", "Blitzkrieg", "Bataille d'Angleterre", "Sur la Manche", "En Roumanie", and "Operation Barbarossa". Each chapter ends with a table listing all 109 "casualties". The

heading are: date, pilot's name and rank, Staffel, pilot's fate, 109 type, W.Nr. & Code, % damage, and cause & location. [Ed: I suspect that the "victory" list will appear in the second part.]

Histoire de la JG 52 is an exhaustively-researched tome that will be of interest to all serious students of WWII in the air.



Batailles Aeriennes #50. Etoile rouse contra Soleil levant: Combats aériens du Nomonhen, mai-septembre 1939. Lela Presse, 29 rue Paul Bert. 62230 Outreau, France. E-mail: contact@avions-bateaux.com. Website: www.avions-bateaux.com.

The section heading should give you some idea of the content and test your knowledge of the French language: "Introduction"; "Le début du conflit"; "Les forces aériennes en présence"; "Les premiers combats aériens"; "Des renforts arrivent à la frontière"; "Un faux début"; "Quand Moscou s'en mêle"; "La seconde phase"; "Bombardement japonais"; "Le rôle de l'aviation de transport dans les deux camps"; "Bain Tsagan: premier échec Nippon"; "Un période de calme relative"; "Problèmes techniques"; "Poursuite des combats"; "Les début de l'aviation mongole"; "Les raids nocturnes des TB-3"; "Joukov passe à l'offensive"; "Un méprise soviétique?"; "L'aviation japonaise faiblit"; "Des renforts pour l'aviation nipponne"; "Réorganisation chez les Japonais et derniers combats"; "Bilan".

For a “small” war lasting only five months, the losses on both sides were enormous: The Soviets lost, to all causes, 249 aircraft [I-16 (109), I-15bis (65), I-153 (22), SB (52), & TB-3 (1)]. The Japanese lost 153 aircraft. [Ki.10 (1), Ki.27 (98), Ki.30 (18), BR.20 (1), Ki.4 (15), Ki.15 (13), Ki.36 (6), & KKJ (1). Manchurian civil aviation lost 3 aircraft: Ki.10 (1), Bf 108 (1), & Fokker F-VII/3m (1).].

Самолестроенето в България

Dimitar Nedialkov

Aircraft Manufacture In Bulgaria



OPTICELL TIAN

Aircraft Manufacture in Bulgaria, by
Dimitar Nedialkov \$37.12. HB

the print in October 2009. This is the hard back version. It also comes in soft back. Contains 196 pages A4 format (21x30 cm.) 8 pages with 28 colour camouflages, 28 graphics and 312 high quality black and white photos, most of them never published before. The book describes the tries of the Bulgarians to build airplanes, dating from the very begging of the aviation era. Goes through the first air war - The Balkan war. The first successful Bulgarian project comes in 1915 from the famous Asen Jordanoff. In the book are described the constructions of all Bulgarian aircraft (Uzunov, DAR, KB, LAZ) with exact drawings. technical characteristics and rich picture material with very high quality. The symbolic end of the book comes in 1955, when Bulgarian joined the Warsaw Pact and under outside pressure stops the manufacture of aircraft. The actual end of the book is dedicated to the hope of revival, connected with the manufacture of the new Bulgarian motor less airplanes. If you like the book to be signed by the author, please note it with your order."

[Editor's note: I received my copy just before this issue of SAFO went to press. And, it is even better than I had hoped. This book is highly recommended to all enthusiast of the small air forces, be they historian or modeler.]

HE 8 (HM II)

Power Plant:
One 400 h.p., Armstrong Siddeley Jaguar V-8C five-cylinder radial engine

Dimensions:
One 12 ft span (wingspan) and by 12 ft high (height)

Span: 12 ft 6 in
Length: 12 ft 6 in
Height: 4 ft 6 in

1. Silver Steel
2. Light Green
3. Light Green
4. Light Blue
5. White
6. White
7. White
8. White
9. White
10. White
11. White
12. White

HE 8 of Luftwaffe, operational in Germany, 1932

HE 8 of Luftwaffe, 1934

HE 8 of Luftwaffe, Spanish Civil War, 1937

HE 8 of Luftwaffe, 1938

across a color profile of a Danish He 8 in the September 1968 issue of *Flying Review International*. The drawing represented a red and silver aircraft used in Greenland. Every since then I've been dreaming of a kit of this aircraft. Now, Broplan has come out with a vacuform kit of the He 8 – and with Danish decals.

The kit consists of 2 large (115 mm by 225 mm) vacuformed sheets of white styrene with all the major components sharply molded with excellent surface detail especially the fabric detail on the flying surfaces. A small (85 mm by 130 mm) injection-molded sprue contains all the small parts (engine, propeller, struts, etc.) with good detail and a minimum of flash.

The large (70 mm by 210 mm) decal sheet consists of the national insignia and serial numbers needed to make any one of the 3 Danish aircraft illustrated on the instruction sheet. As usual with recent Broplan decals, the modeler is advised, "The decal sheet must be sprayed with no less than two coats of clear acrylic before transferring to

102

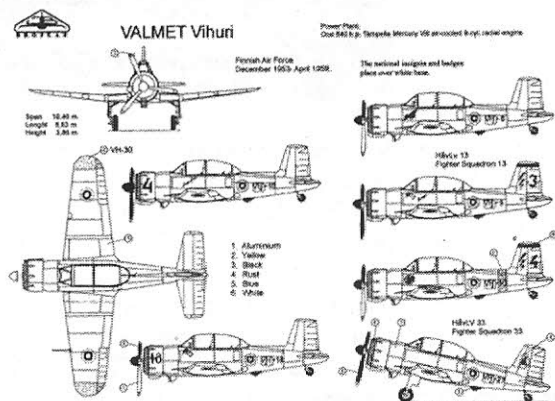
the model" and "The national insignia must be placed over a white base".

The large (210 mm by 295 mm) 2-sided instruction sheet consists of the usual Broplan exploded-view construction diagram, a cut-a-way drawing of the cockpit interior, and diagrams identifying the parts. Top-, bottom-, and side-views illustrate the colors and markings for three aircraft: '91' in an over-all "silver" scheme from 1931, '87' in an eye-catching red/silver scheme for operations in Greenland 1932, and '180' camouflaged in olive green and khaki brown over light blue from 1940.

Probably the most difficult aspect of the construction is assembling the struts connecting the twin floats to the fuselage and wings. The diagram of the injection-molded parts is confusing because the gates are shown along with the parts. I enlarged the diagram to full size and colored in the sections representing the struts. I intend to replicate the struts in wood and assembled the pieces to replicate the complex arrangement of the structure. This will allow me to determine the best assembly sequence and what jigs may be necessary to insure proper alignment of the floats and their connection to the fuselage. It will probably be necessary to add cross braces at the top of the struts to fit into slots cut into the bottom of the fuselage.

Fitting the interior into the fuselage will need careful planning. I will probably join the fuselage halves together in the usual way and then cut out the bottom of the fuselage where the wing spar enters it. The kit conveniently supplies a broad spar that not only provides support for the wings, but also serves as the floor of the pilot's compartment. The resulting hole should leave room to insert the crew section through the resulting hole. The pilot's position sits directly on this spar so that it can be affixed to the spar before the spar is fixed in place and the hole on the bottom of the fuselage covered over. Wish me luck.

The Broplan kit of the Heinkel is an excellent kit of a beautiful aircraft. However, due to the complexity of construction it can be recommended only for the modeler experience in building vacuform models.



Valmet Vihuri. 1/72-scale short-run injection-molded plastic kit with decals and a vacuum-molded canopy. Broplan MS128. Broplan, c/o Janusz Brozsk, ul. Pilotow 10G/33, 80-460 Gdansk, Poland.

Janusz Brozsk has chosen a rather obscure subject for his newest injection-molded kit. I assume that not many SAFO readers knew that the Vihuri is a 2-seat monoplane trainer that was designed in Finland. The prototype, VH-1, first flew in 1951, and the Finnish AF purchased an additional 50 Vihuri with codes VH-2 to VH-51. The main identification feature of the Vihuri is the large canopy that appears out of place on the small airframe.

The Broplan kit of the Vihuri consists of two injection-molded sprues of white styrene with a minimum of flash and finely-incised surface detail. The wing consists of 3 parts: a full-span lower section insuring accurate dihedral and two 2 top surface panels. There is even a little detail inside the wheel wells. Interior detail consists of 11 parts including the side-wall lattice structure. The modeler will have to pay special attention constructing the interior since the large clear canopy exposes most of it to view.

A sheet of vacuformed clear styrene provides two canopies and two landing-light covers (in case the modeler botches one). The canopy is clear and free of blemishes so all the work the modeler puts into the interior will be clearly displayed.

The small (37 mm by 102 mm) decal sheet provides all the national insignia, 4 unit insignia (including the familiar WWII "panther", "crow", & red devil"), aircraft names ("Silver Star" and "Tre Broder"), and codes and serials for all 5 of the aircraft illustrated on the instruction sheet. As usual with recent Broplan decals, the modeler is advised, "The decal sheet must be sprayed with no less than two coats of clear acrylic before transferring to the model" and "The national insignia must be placed over white base".

The large (210 mm by 295 mm) 2-sided instruction sheet consists of the usual Broplan exploded-view construction diagram, a cut-a-way drawing of the cockpit interior, and diagrams identifying the parts. The other side consists of top-, bottom-, and side-views giving the colors and markings for 5 aircraft. All these aircraft are in an over-all 'aluminum' finish. For the modeler wishing to avoid 'natural metal' finishes, the Finnish book, *Suomen Ilmavoimien Lentokoneet 1939-72*, has a side-view drawing of Vihuri 'VH-20' in an over-all green finish. This serial can be made up of the serials on the Broplan decal sheet.

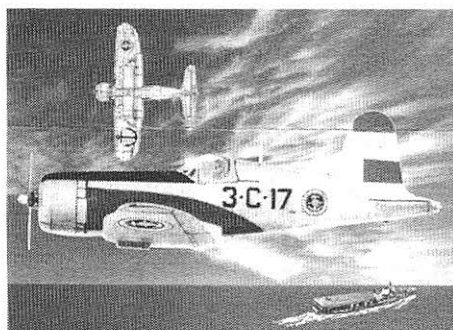
The Broplan kit of the Valmet Vihuri is an excellent kit, probably the best injection molded yet from Broplan. It is highly recommended to all modelers who want to add something really esoteric to their collection – and who are not afraid of doing a little extra interior details.

Ron Ferreyra of All Scale Decals (ASD) has released 10 new decals. Each set includes a sheet of well-printed decals in perfect register and brilliant colors. As common for all ASD, the more complicated decals are printed on the background color of their respective aircraft. While this eliminates tedious cutting, it does require the modeler to match his paint to the decal. Fortunately, the background colors of the decals appear to be close matches to the colors of the depicted aircraft. The instruction sheet for each set includes a color drawing of the aircraft, a drawing showing the placement of the decals, and some sets have a color 3-view drawing.

All of these decals are for subjects that modelers of the aircraft of the small air forces have wanted to build but were frustrated by the lack of decals. Particularly welcome are the complicated roundels for the Argentine Corsairs and the colorful tail feathers for the Venezuelan Flankers.

These decals can be ordered from the SAFCH Sales Service. Postage is included for order from the US. All others add 20%.

Argentina Fiat G.55. 1/72 scale. The 100 mm by 55 mm decal sheet includes 6 roundels, rudder stripes w/ star, and 6 black code numbers 'C-21' for an overall light grey Centauro. \$4.00.



Argentina Vought F4U-5 Corsair, 1/72 scale. The 115 mm by 70 mm decal sheet includes 2 black anchors, 2 each black code numbers '3-C-17' and '3-A-211', rudder stripes w/ sun, and 4 of the complicated navy roundels for a Corsair in light gull grey upper surfaces and white undersurfaces. \$4.00.



Argentina Vought F4U-5N Corsair, 1/72 scale. The 125 mm by 85 mm decal sheet includes 2 white anchors, 2 each white code numbers '3-A-209' and '3-A-120', 2 white s/n '124705', rudder stripes w/ sun, and 2 navy roundels for an overall dark sea blue night-fighter Corsair. \$4.00.

Chilean F-16C/D Block 50. 1/48 scale. The 90 mm by 85 mm decal sheet includes 3 white codes '855' on dark grey background, 3 white codes '855' on light grey background, rudder stripe w/ white star, two "roundels", and assorted other markings. Aircraft is camouflaged in shades of gunship grey on top and light ghost grey underneath. \$4.00.



Colombia T-34 Mentor. 1/72 scale. The 75 mm by 25 mm decal sheet includes 2 large black codes '231', 2 small codes 'FAC 231', 2 titles 'Fuerz Aera Colombiana', rudder stripes, and 4 roundels for an overall bare metal Mentor with red wing tips. \$3.00.

Cuba MiG-17 Fresco. 1/72 scale. The 60 mm by 55 mm decal sheet includes 2 black codes '232', rudder stripes, and 4 roundels for an overall light grey Fresco. \$3.00.

Paraguay Fokker T-21. 1/50 scale. The 95 mm by 80 mm decal sheet includes 4 black codes '0027', 2 black type designations 'T-21', rudder stripes, and 2 roundels for an overall bare metal aircraft with orange fuselage stripe and wing tips. For the Smer/Artiplast kit. \$4.00.



Paraguay Aerotec T-23 Uirapuru. 1/72 scale. The tiny 30 mm by 40 mm decal sheet includes 2 black codes '0010', rudder stripes, and 2 roundels for a Uirapuru with white fuselage and red wings and red horizontal tail. All Scale Decals parent company, Armalo, is working on a vacuform/resin 1/72-scale model of the Uirapuru. \$3.00.



El Salvador Vought FG-1D Corsair. 1/72 scale. The 85 mm by 85 mm decal sheet includes 4 black 'FAS', 2 small codes '201', rudder stripes, 2 roundels, and black-outlined band for the light blue cowl for a overall light grey "Soccer War" Corsair. \$4.00.



Venezuela Sukhoi Su-30 Flanker. 1/72-scale. The 110 mm by 70 mm decal sheet includes the colorful tail decorations, 2 black s/n '1259', 2 black codes '0460', 2 black 'AMV', 2 pennant-shaped unit badges, and 2 roundels for Hugo Chavez's Flankers. The modeler will have to consult other sources for a camouflage scheme. \$4.00.

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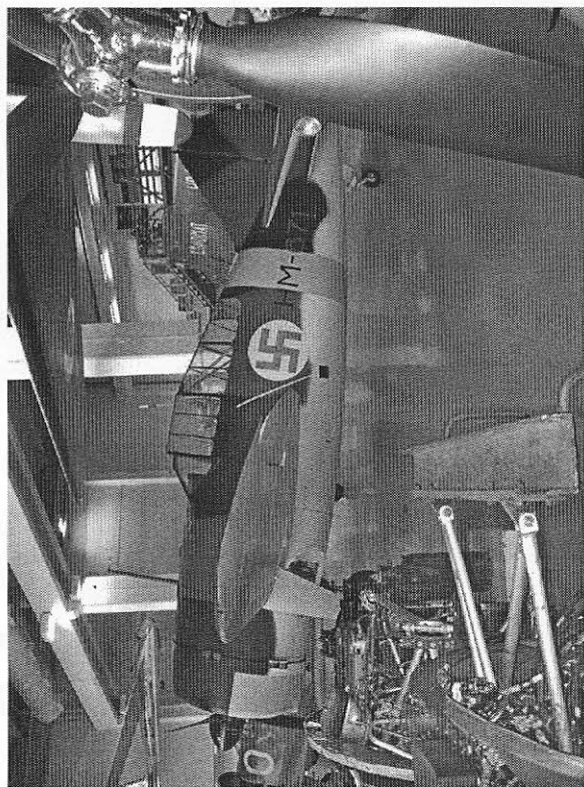
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A Visit to the Aviation Museum at Tikkakoski, Finland

Photos from Randy Koivisto, via Terry Love



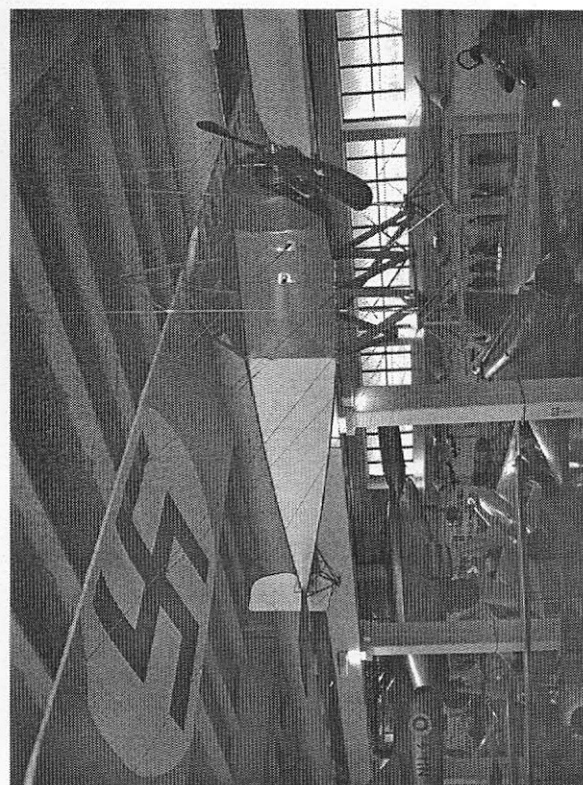
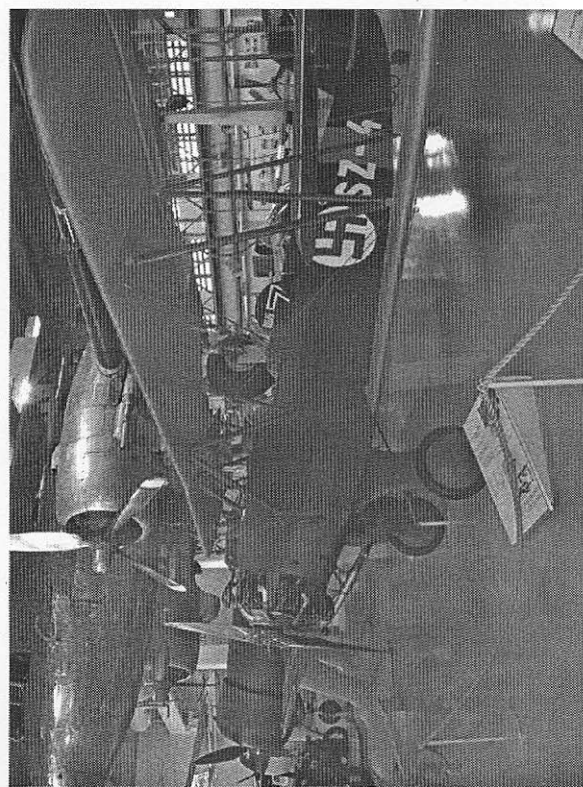
Brewster B-239 ↑

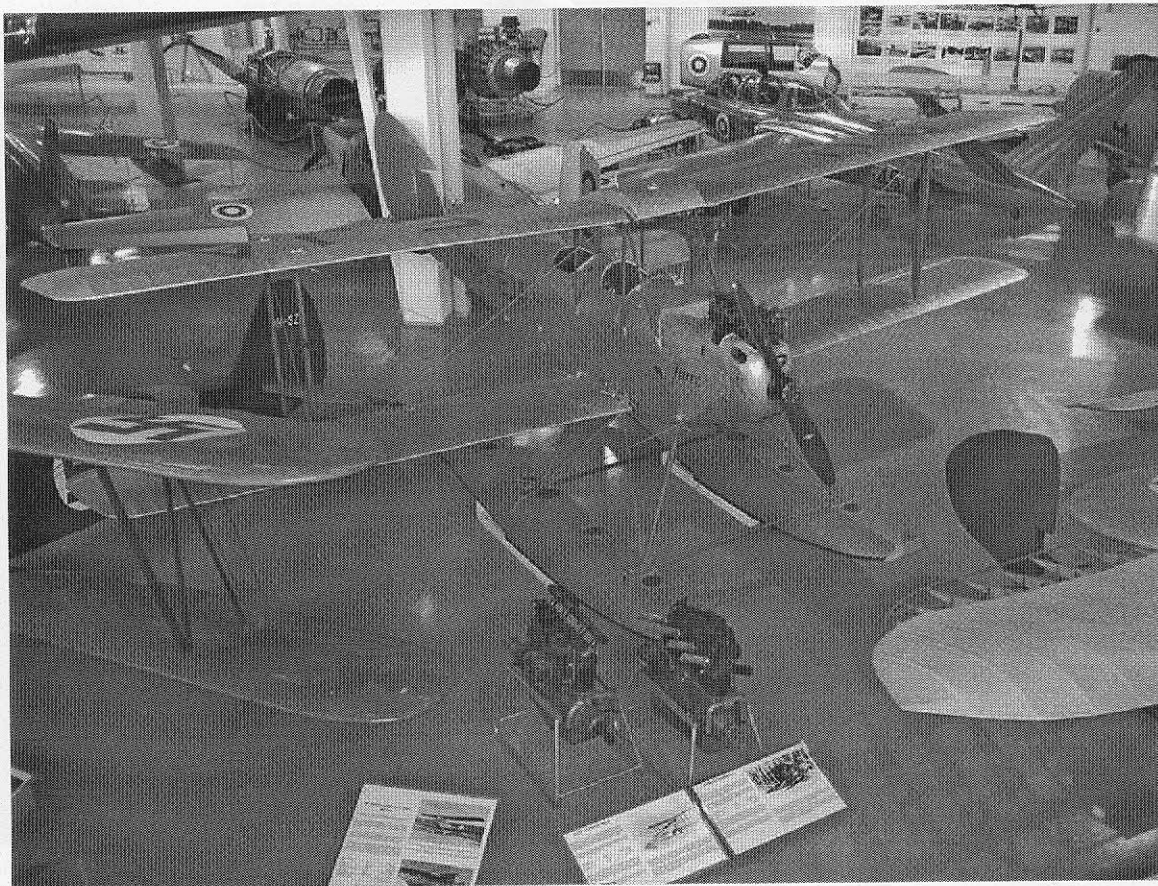
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